5.3 Comparisons Between Vehicle Activity and Ambient Air Quality by Day-of-Week

5.3.1 Abstract

Measurements of ozone precursors in Los Angeles and Orange Counties demonstrate clear relationships to traffic activity. Hourly profiles for carbon monoxide (CO) and nitrogen oxides (NO_x) respond to the hourly activity of traffic on freeways for each day of the week. Data for activity on surface streets was not available. The CO and NO_x responses are consistent with expectations based on emissions inventories and the freeway activity profiles. The percent change in CO levels can be used as an approximate surrogate for the percent change in hydrocarbons (VOC or ROG).

According to a recent emissions inventory, light-duty vehicles (LDVs) account for 77% of CO and 39% of NO_x emissions, while heavy-duty trucks (HDTs) account for 4% of CO and 27% of NO_x. This is important because LDV and HDT activity decrease on weekends by substantially different proportions.

Weigh-in-Motion data for Los Angeles and Orange Counties (central not peripheral stations) show that the volume of LDVs on freeways is about 90% on Saturday and 78% on Sunday compared to mid-week levels. The corresponding volumes of HDTs are substantially smaller, about 39% on Saturday and 22% on Sunday when compared to mid-week volumes.

Consistent with the activity data and the inventory, the percent decrease in NO_x on weekends is greater than the percent decrease in CO. The air quality data (central not peripheral sites) indicate that CO levels are about 93% on Saturday and 74% on Sunday compared to mid-week levels. The corresponding NO_x levels are substantially less; NOx levels are about 75% on Saturday and 56% on Sunday when compared to mid-week levels.

The behavior of the VOC to NOx ratio was estimated using the behavior of CO measurements as a surrogate for the behavior of VOCs. As estimated, the ratio of VOC to NO_x is approximately 10 to 30% higher on Saturday and 20 to 40% higher on Sunday compared to mid-week levels from midnight to 4 p.m.

An alternative analysis of the VOC to NOx ratio is consistent with the preceding estimates. The alternative analysis did not use air quality data; instead, it is based on the WIM data, the inventory data, and the hourly freeway data. With respect to mid-week levels, this analysis suggests that the VOC to NOx ratio should be approximately 27% greater on Saturday and 37% greater on Sunday. These values fall within the range of the preceding air quality analysis. Although changes in emissions from other sources of VOCs and NO_x also affect ozone precursors on weekends, emissions from on-road mobile sources appear to be a major determinant of the weekend effect.

The circumstantial evidence from changes in traffic and air quality is consistent with Hypothesis #1, Hypothesis #2, and Hypothesis #3. However, the data lack

sufficient detail to isolate a single hypothesis or to support or refute Hypothesis #4, which concerns carryover of ozone and ozone precursors aloft (above the nocturnal boundary layer).

5.3.2 Introduction

Changes in the volume and composition of traffic on weekends compared to weekdays may be the single most important factor determining the ozone weekend effect. Emissions from on-road motor vehicles comprise a large share of the inventories for ozone precursors. Therefore, we compare day-of-week profiles for traffic with the corresponding profiles for relevant pollutants. For this purpose, we use the 11 sub-regions of Los Angeles and Orange Counties that were used in Section 5.2.

In the current section, we also consider the relationships between emissions and air quality as these offer insight concerning the cause(s) of the weekend effect.

5.3.3 Methodology

5.3.3.1 Traffic data

For the comparisons between traffic and air quality, we use the traffic data presented in sections 5.1 and 5.2. In particular, the hourly profiles for freeway activity by day of week are the primary data that we compare to the corresponding air quality profiles.

Weigh-in-Motion data are applied as if their weekday and weekend differences on a 24-hour basis pertain to all hours of the day equally. Until data with greater temporal resolution are available, this type of assumption is required.

In addition to the summaries in sections 5.1 and 5.2, a few new tabular summaries help facilitate comparisons between traffic and the air quality data.

5.3.3.2 Air quality data

For this section, we prepared a set of air quality profiles in addition to those presented in Section 5.1. The profiles used here are based on three years of data, 1996 – 1998 for two reasons. First, using three years of data reduces the meteorological variability affecting the hourly averages. Second, traffic data collected in the summer of 1997 are best compared to air quality profiles that represent data centered on 1997.

Air quality profiles were prepared for each subregion (or domain) identified for traffic analysis in section 5.2. Each domain has a profile for CO, NO_x, ozone, and the NO_2 to NO ratio (except Irvine/El Toro, for which NO_x data were not available). To create the NO_2 to NO ratio for an hour of the day, we used the ratio of means rather than the mean of ratios. First, we calculated the mean for NO_2 and the mean for NO for the specified hour using all relevant days. We then divided the NO_2 mean by the NO mean.

The ratio of means is more reliable than the mean of ratios <u>in this case</u> because the mean of ratios has a tendency to overestimate the true value.   The mean of rations has this tendency because very low NO concentrations in the denominator cause excessively high ratios on some days. In addition, some valid NO values may be zero due to instrument resolution and rounding. The ratio of means avoids problems that arise when attempting to divide by zero to make a daily ratio.

The profiles for CO, NOx, and ozone are presented both in original units and as proportions of their respective mid-week levels.

Profiles for the NO_2 to NO ratio do not include the proportional scale with respect to mid-week values; instead, only the original (unitless) scale is provided for each domain. Because the El Toro air quality (Irvine domain) site does not measure nitrogen oxides, Irvine is limited to profiles for traffic and CO.

The proportional, unitless profiles provide the primary basis for comparisons between traffic activity and air quality. This approach allows the relationships between traffic and air quality in different domains to be considered with a comparable frame of reference.

5.3.3.3 Comparisons between traffic data and air quality data

A brief emissions inventory is given in Table 5.3-1. This inventory helps us anticipate the probable effects of changes in traffic on air quality. In particular, the inventory helps to limit the potential to overstate the effects of traffic on air quality.

For general comparisons, we merged information from all 11 sub-regions that were identified in Section 5.2. Figure 5.3-1 shows composite profiles for CO expressed as a proportion of midweek CO levels. Figures 5.3-2 and 5.3-4 show comparable graphs for NO_X and for freeway traffic.

The composite profile for traffic in original units is shown in Figure 5.3-5. This figure is scaled to relate to a daily total volume of one million vehicles.

The composite results for the NO_2 to NO ratio are shown in Figure 5.3-3.

 Comparisons between traffic and air quality in each of the 11 sub-regions are based on Figures 5.3-6 through 5.2-79.

5.3.4 Results and Discussion

Tables 5.3-2 and 5.3-3 show aggregate relationships between traffic and air quality during the daylight hours. These summaries reveal a strong effect of the morning commute traffic on air quality in the morning hours.

In addition, Table 5.3-3 shows that the change in air quality is damped. That is, the low points in air quality are higher than the low points in the traffic volume and the

high points in air quality are lower than the high points for traffic. This phenomenon probably occurs for more than one reason.

First, the atmosphere acts as a sponge, absorbing emissions for multiple hours to arrive at its present content of a pollutant. Therefore, air quality behaves similar to a moving average that overcuts the valleys and undercuts the peaks.

Second, traffic is not the only source of ozone precursors. The activity of these other sources is unlikely to follow exactly the same profile as traffic activity. Therefore, the aggregate profile for the sum of emissions from the multiple sources will not follow any one source but will reflect the sum of the profiles.

The NO_2 to NO ratios at Lynwood and Reseda invite further investigation. The ratio at Lynwood is substantially smaller than the ratio for any other location. There are at least two possible explanations for the NO_2 to NO ratio at Lynwood. First, the area may have a large source of fresh NO emissions throughout the day? Second, the data could reflect a systematic error in calibrating the "zero" level for NO; if the denominator (NO) is bounded away from zero, then the NO_2 to NO ratio would be underestimated.

At Reseda, the profiles are unique among the sites considered. On all days of the week, the profile dips in the afternoon and rises again toward evening. This afternoon dip is substantial and Saturday and Sunday even dip below the weekday NO_2 to NO ratio during this time.

The profiles at Reseda indicate a mid-day increase in fresh NO emissions or a mid-day decrease in NO_2. Furthermore, the cause seems to exert itself even more strongly on weekdays.

An obvious feature of the CO and NO_x profiles is that they are not simply a constant fraction of the mid-week levels. These profiles indicate that both the amount and the timing of ozone precursors are significantly different on weekends compared to weekdays.

5.3.5 Conclusions

With respect to ozone, two of the weekend-effect hypotheses focus primarily on emissions during the daylight hours. Hypothesis #1 (NO_X-reduction) focuses on the aggregate difference between emissions on weekdays compared to weekends. Hypothesis #2 (NO_X-timing), on the other hand, focuses on when emissions occur on weekdays compared to weekends.

Both of these hypotheses are circumstantially consistent with the relationship between the amount and timing of traffic and the amount and timing of ambient levels of CO (VOC surrogate) and NO_x.

Hypothesis #3 (Carryover near the surface) and Hypothesis #4 (carryover aloft) concern carryover of ozone and/or precursors. According to Hypothesis #3, traffic during the early morning hours (midnight to 5 a.m.) on Saturday and Sunday is greater

than the mid-week levels. Therefore, additional amounts of ozone precursors are injected into the nocturnal boundary layer during these hours. For CO (as a surrogate for VOC's), the diurnal profiles generally support the idea that emissions are greater on Friday and Saturday nights compared to other nights. For NO_x, the evidence is mixed with NO_x being greater than mid-week levels on weekends at some sites and equal or lower on weekends at other sites.

Overall, however, the diurnal profiles for CO and NO_X indicate that carryover near the surface is not a plausible cause of the ubiquitous ozone weekend effect in the South Coast Air Basin. Ambient concentrations of CO and NOX during the daylight hours are lowest on Sunday for all sub-regions examined, while the ozone weekend effect is most pronounced on Sundays at all locations in the basin.

Hypothesis #4 cannot be evaluated with the current data. This hypothesis asserts that ozone and ozone precursors that carryover above the nocturnal boundary layer strongly influence surface ozone concentrations on the following day. This possibility is important because the conditions aloft are similar to the conditions "downwind" (Sillman, 1999). That is, the conditions aloft may be strongly NO_x-limited rather than VOC-limited.

5.3.6 Recommendations

Extend the analyses when data are available. The desired extensions include:

- Hourly traffic on both freeways and surface streets.
- Hourly traffic identified by weight class.
- Local emission inventories for comparison to local ambient data.
- High quality data for VOC's rather than using CO as a surrogate.
- Spatial coverage to include Riverside and San Bernardino Counties.

These recommendations address the gaps in the data that now prevent clear differentiation between alternative causes of the weekend effect.

5.3.7 References

Sillman, S. (1999) "The relation between ozone, NO_x, and hydrocarbons in urban and polluted rural environments," Atmospheric Environment, **33:** 1821-1845.

Table 5.3-1 Brief emission inventories for the South Coast Air Basin.

Source Category	Reactive Organic Gases 1995	Reactive Organic Gases 2000	Nitrogen Oxides 1995	Nitrogen Oxides 2000	Carbon Monoxide 1995	Carbon Monoxide 2000
Stationary Sources	275	279	144	118	71	66
Area-Wide Sources	228	200	31	34	716	633
On-Road Mobile Sources:	1031	730	1045	844	9653	6525
Heavy-Duty Trucks	41	36	328	348	431	302
Other Vehicles	990	694	718	496	9223	6223
Other Mobile Sources	108	108	270	268	870	808
Natural Sources	n/a	4	n/a	5	n/a	106
Total	1642	1321	1490	1269	11310	8138
Percent of total by Year						
Stationary Sources	16.7%	21.1%	9.7%	9.3%	0.6%	0.8%
Area-Wide Sources	13.9%	15.1%	2.1%	2.7%	6.3%	7.8%
On-Road Mobile Sources:	62.8%	55.3%	70.1%	66.5%	85.3%	80.2%
Heavy-Duty Trucks	2.5%	2.7%	22.0%	27.4%	3.8%	3.7%
Other Vehicles	60.3%	52.5%	48.2%	39.1%	81.5%	76.5%
Other Mobile Sources	6.6%	8.2%	18.1%	21.1%	7.7%	9.9%
Natural Sources		0.3%		0.4%		1.3%

Note: Values representing mobile sources are based on EMFAC 2000 (v.199). The heavy-duty truck category includes all trucks weighing 8500 lbs. and up. Other values are based on the CEFS 1996 Base Year Forecast Scenarios for the 2000 Almanac.

Table 5.3-2 Comparison of traffic and air quality during daylight hours (6 a.m. through 8 p.m.) expressed as percent of the midweek (Tue. – Thu.) average.

Parameter	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Traffic	70%	98%	100%	100%	101%	98%	83%
Carbon Monoxide	73%	96%	100%	99%	100%	104%	89%
Nitrogen Oxides	60%	92%	100%	100%	100%	100%	75%

Table 5.3-3 Comparison of traffic and air quality showing that levels of precursors exhibit a "damped" response to changes in traffic volumes.

| Traffic Domain | Sunday | | | | | |
| | 6 - 8 a.m. | | | 12 - 2 p.m. | | |
	Fwy Traffic	CO	NOx	Fwy Traffic	CO	NOx
Anaheim	0.26	0.57	0.41	0.96	0.87	0.65
Azusa	0.24	0.70	0.53	0.97	0.79	0.54
Burbank	0.24	0.73	0.50	0.93	0.74	0.55
Hawthorne	0.30	0.60	0.52	0.93	0.88	0.66
Irvine (El Toro)	0.24	0.36	n/a	0.92	0.74	n/a
L.A. - CBD (N. Main)	0.28	0.61	0.46	0.97	0.79	0.54
Lynwood	0.34	0.50	0.46	0.94	0.98	0.76
N. Long Beach	0.24	0.58	0.48	0.78	0.72	0.60
Pico Rivera	0.26	0.69	0.48	0.98	0.80	0.50
Pomona	0.27	0.66	0.51	1.02	0.84	0.59
Reseda	0.27	0.64	0.54	0.98	0.73	0.56
Average	0.27	0.60	0.49	0.94	0.81	0.60

| Traffic Domain | Saturday | | | | | |
| (A.Q. Site if different) | 6 - 8 a.m. | | | 12 - 2 p.m. | | |
	Fwy Traffic	CO	NOx	Fwy Traffic	CO	NOx
Anaheim	0.50	0.76	0.68	1.05	0.95	0.81
Azusa	0.43	0.91	0.81	1.05	0.98	0.75
Burbank	0.44	0.89	0.75	1.04	0.89	0.74
Hawthorne	0.49	0.72	0.68	1.03	0.96	0.78
Irvine (El Toro)	0.44	0.66	n/a	1.05	1.06	n/a
L.A. - CBD (N. Main)	0.51	0.82	0.72	1.05	0.98	0.75
Lynwood	0.56	0.71	0.70	1.06	1.22	0.91
N. Long Beach	0.43	0.77	0.66	0.90	0.93	0.71
Pico Rivera	0.52	0.87	0.75	1.06	0.95	0.68
Pomona	0.46	0.86	0.77	1.09	0.98	0.77
Reseda	0.46	0.82	0.71	1.06	0.86	0.71
Average	0.48	0.80	0.72	1.04	0.98	0.76

Figure 5.3-1 Hourly values of CO by day-of-week expressed as a percent of the midweek hourly value; composite of results for 11 sub-regions of the South Coast Air Basin
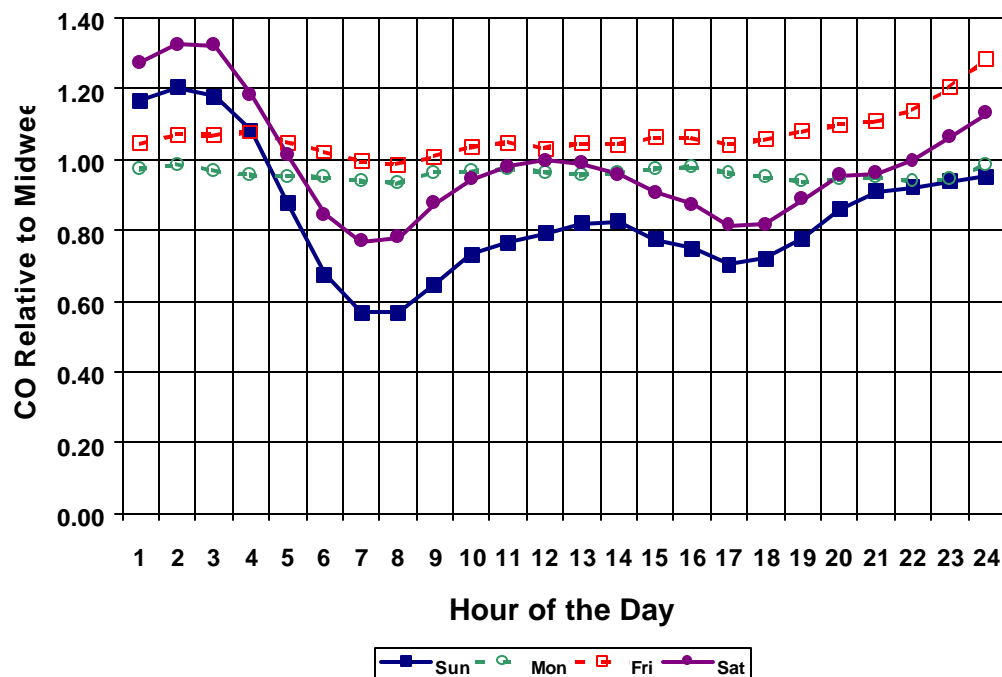
Figure 5.3-2 Hourly values of NO_x by day-of-week expressed as a percent of the midweek hourly value; composite of 11 sub-regions of the South Coast Air Basin
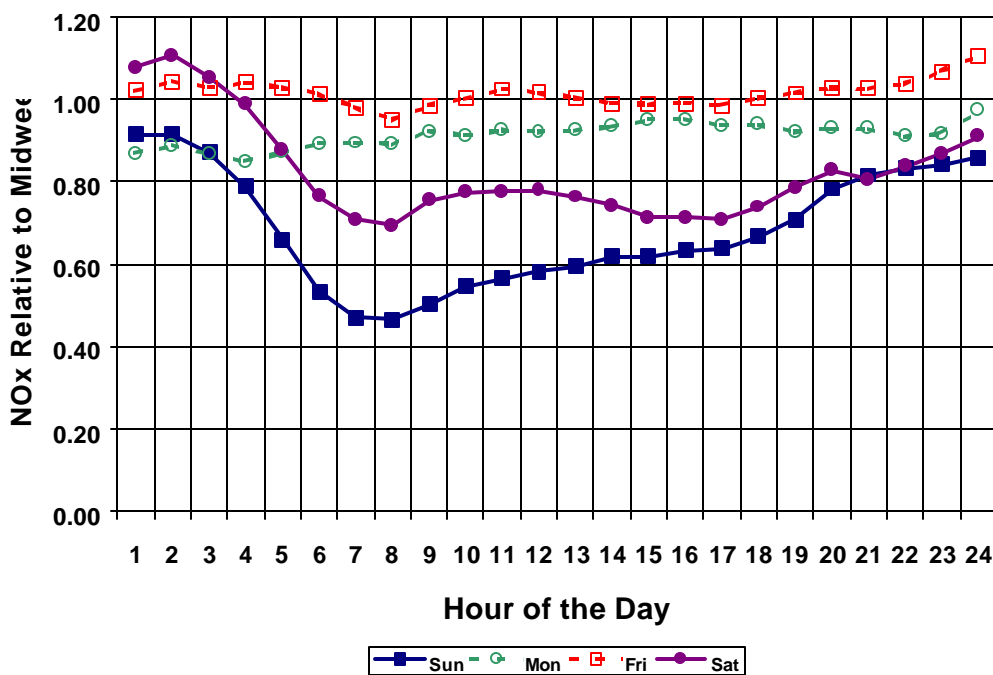
Figure 5.3-3 Pseudo "VOC/NOx" ratio by day-of-week expressed as percent of the midweek value; composite of 11 sub-regions of the South Coast Air Basin
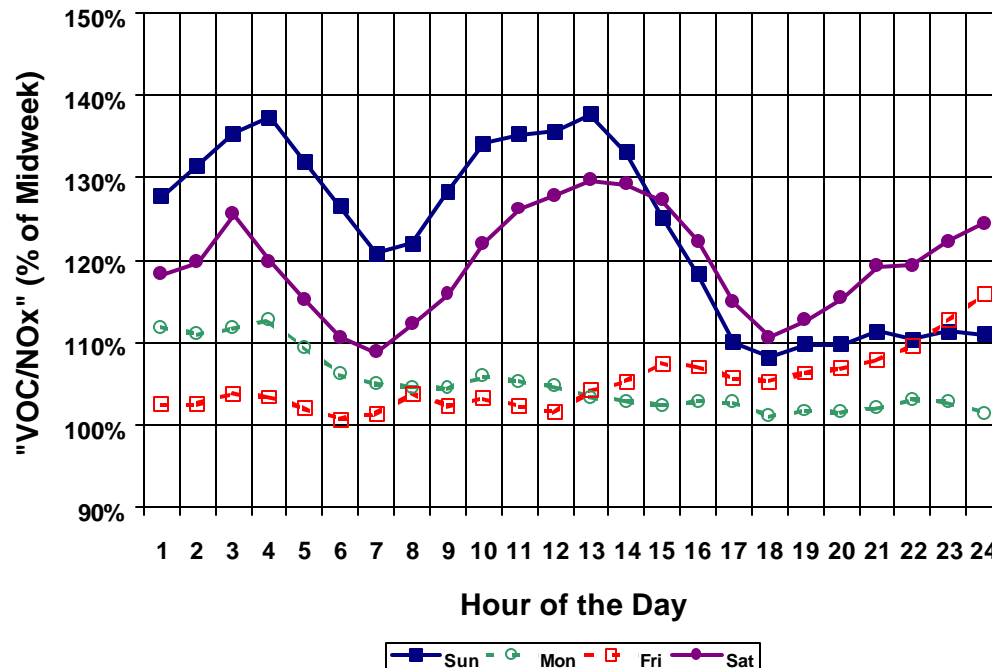
Figure 5.3-4 Freeway traffic by day-of-week expressed as percent of the midweek value; composite of results for 11 sub-regions of the South Coast Air Basin
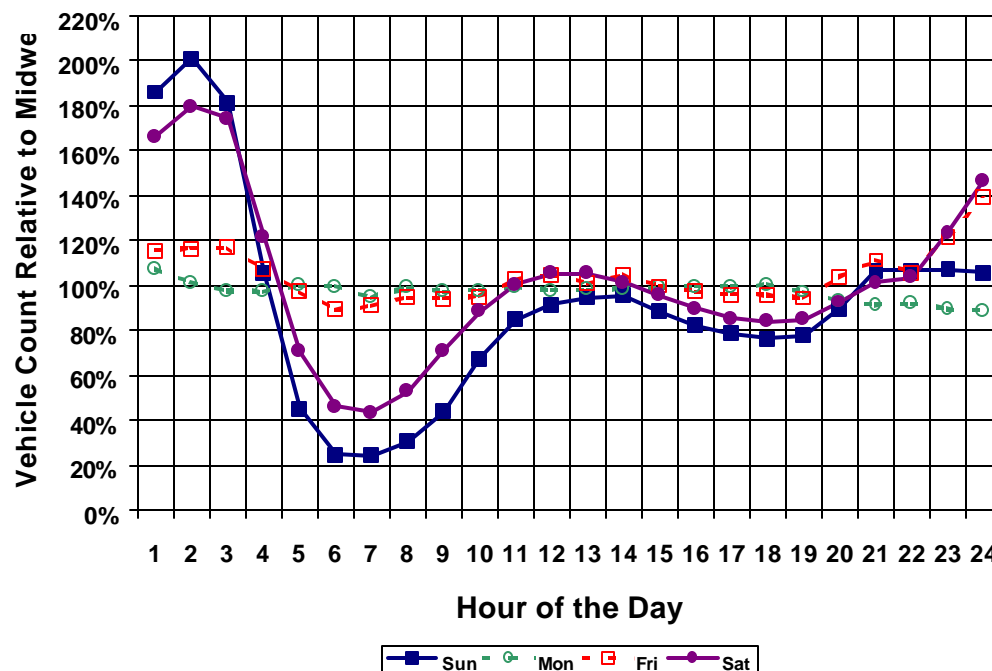
Figure 5.3-5 Freeway traffic by day-of-week normalized to a midweek daily total of one million vehicles; composite of 11 sub-regions of the South Coast Air Basin
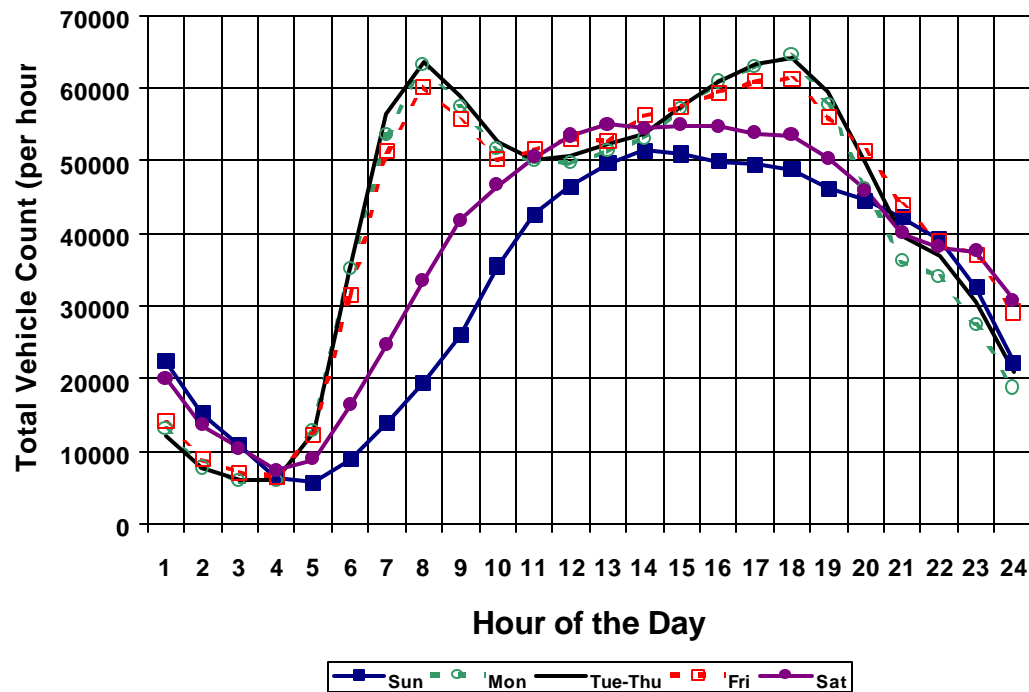
Figure 5.3-6 Carbon monoxide profiles by day of week at Anaheim, based on data for the May – October ozone seasons of 1996-1998.
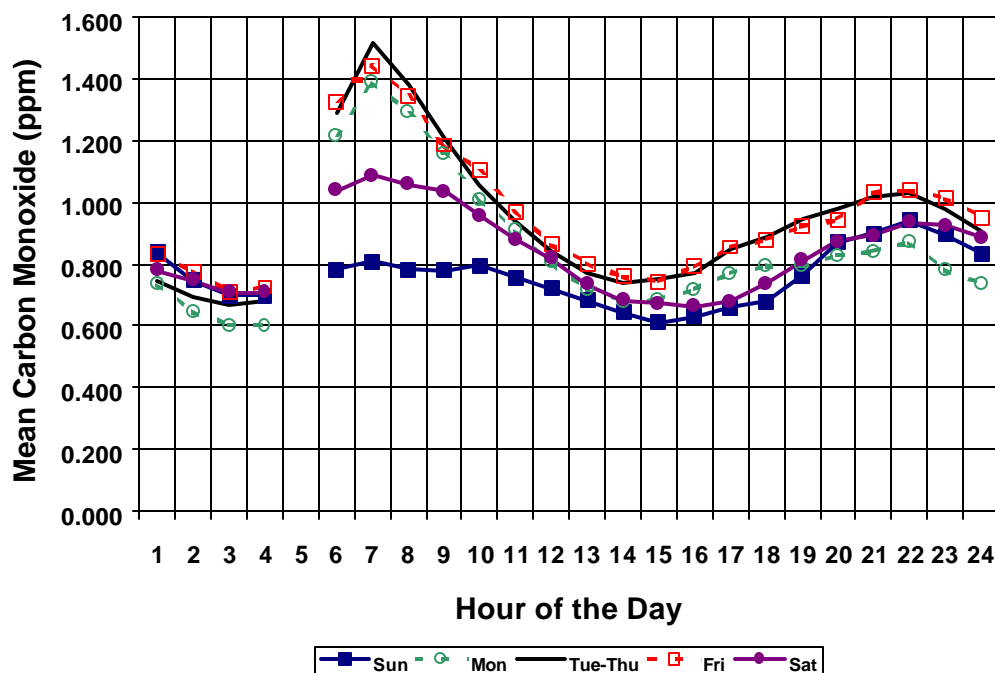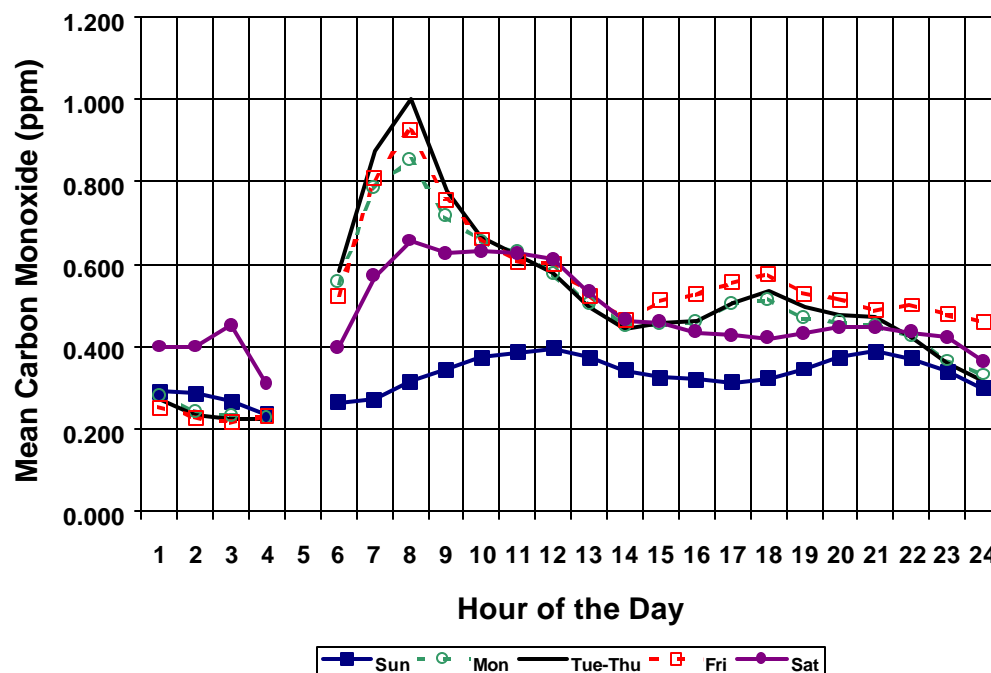

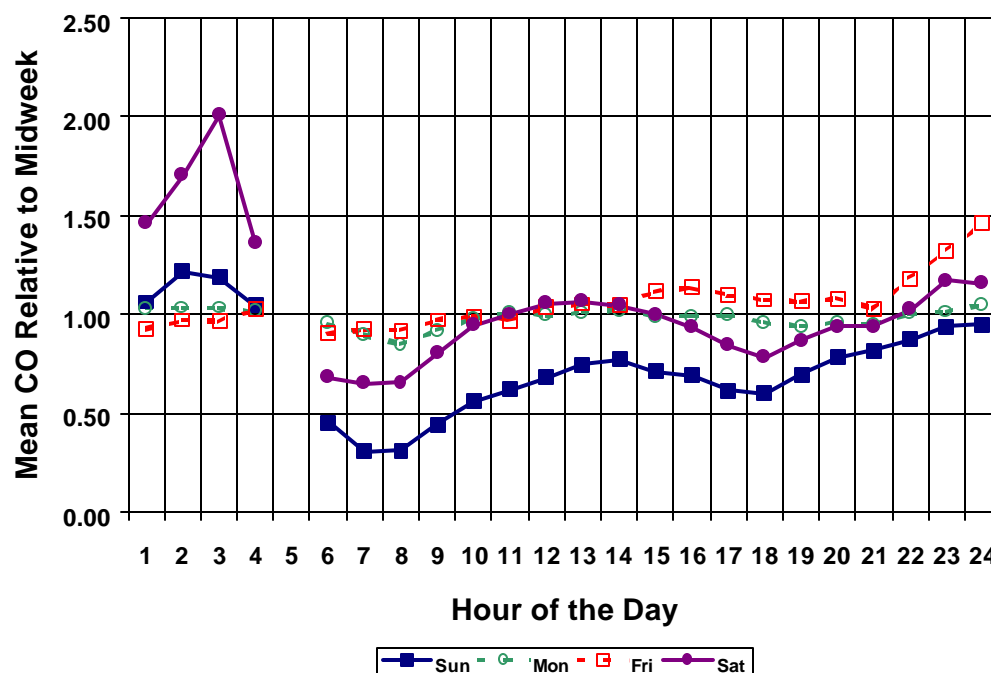**Figure 5.3-7 Carbon monoxide profiles for Anaheim, expressed as a proportion of the midweek values.**
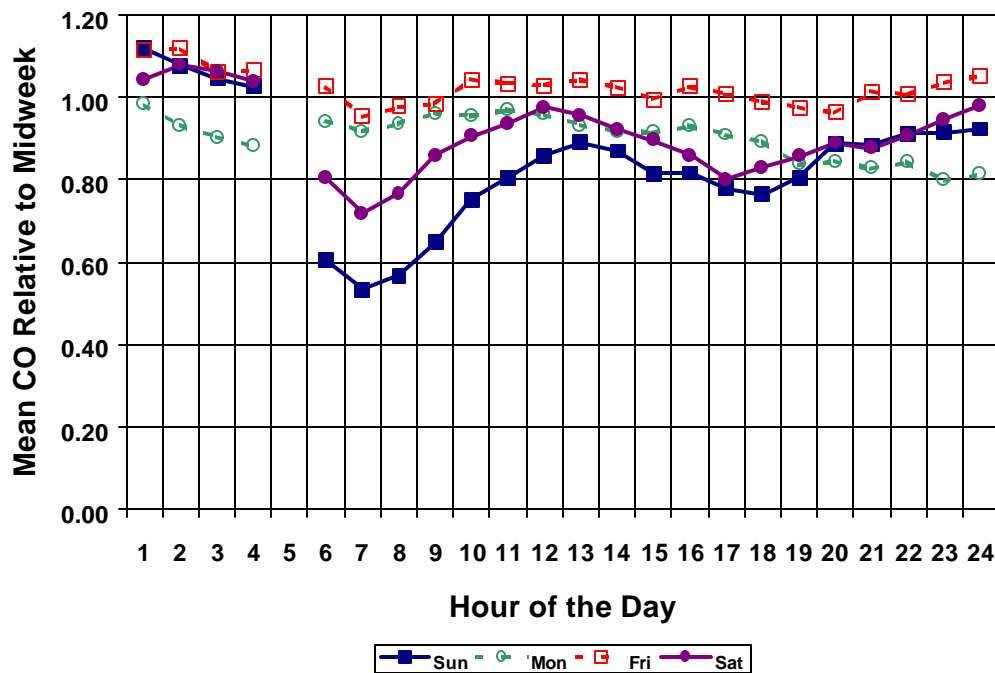
Figure 5.3-8 Nitrogen oxides profiles by day of week at Anaheim, based on data for the May – October ozone seasons of 1996-1998.
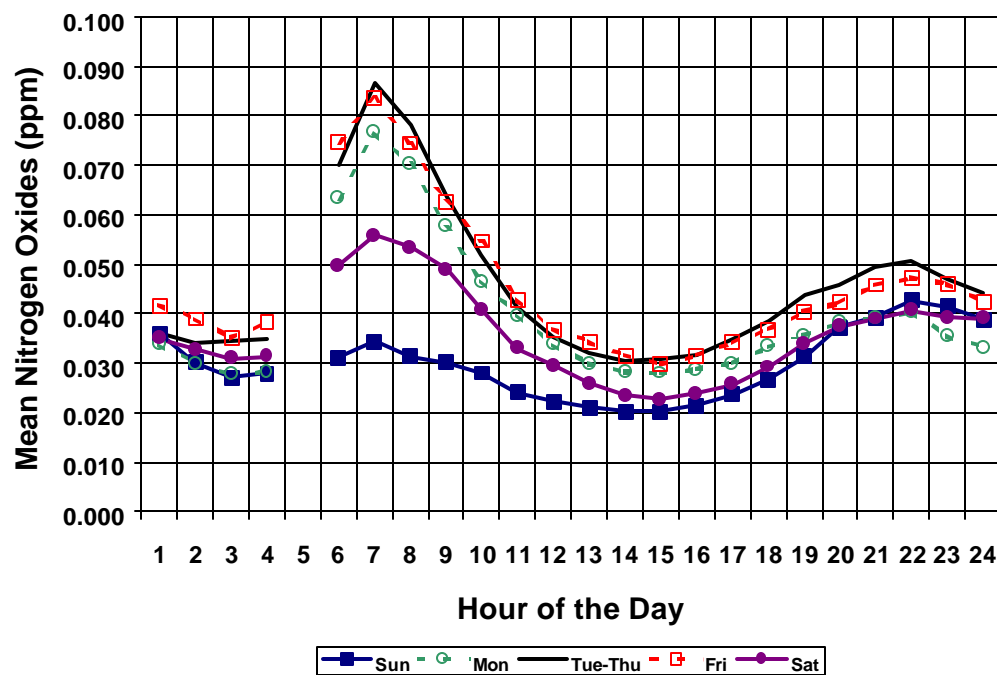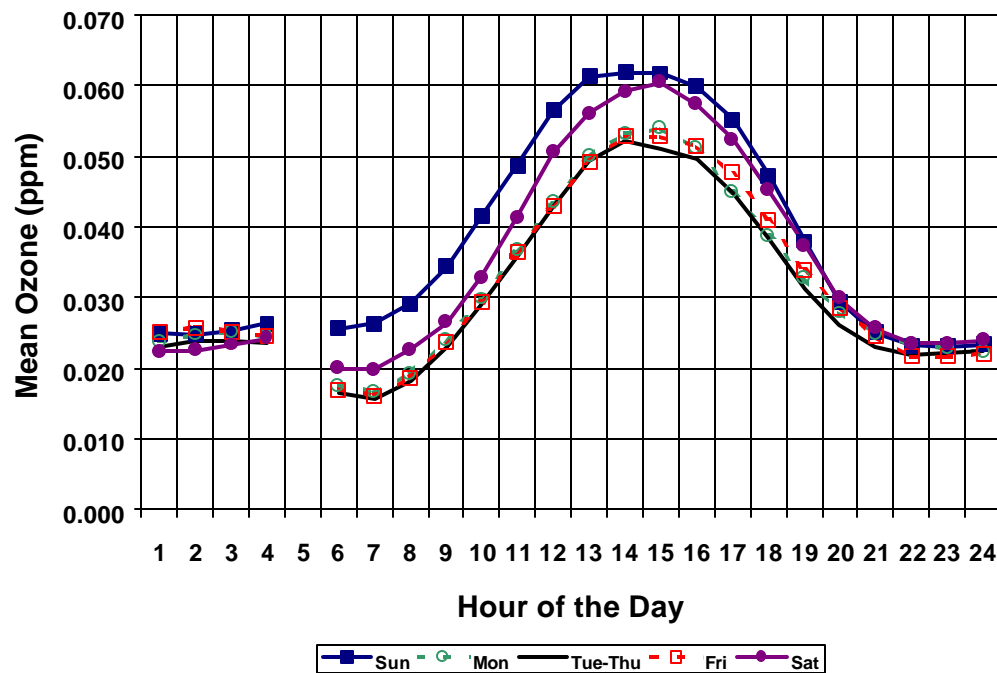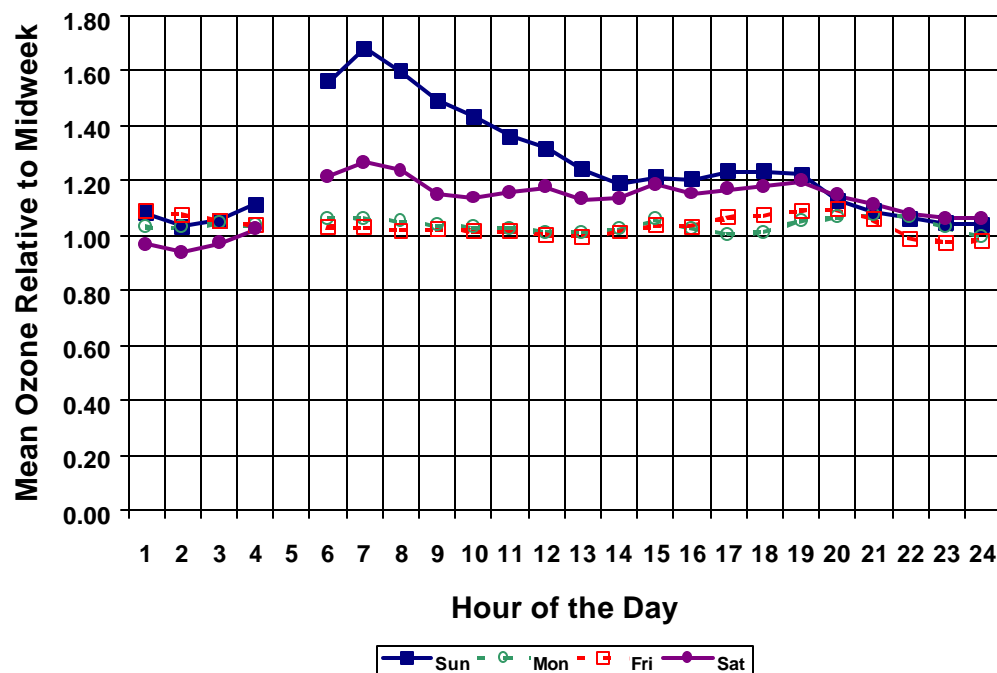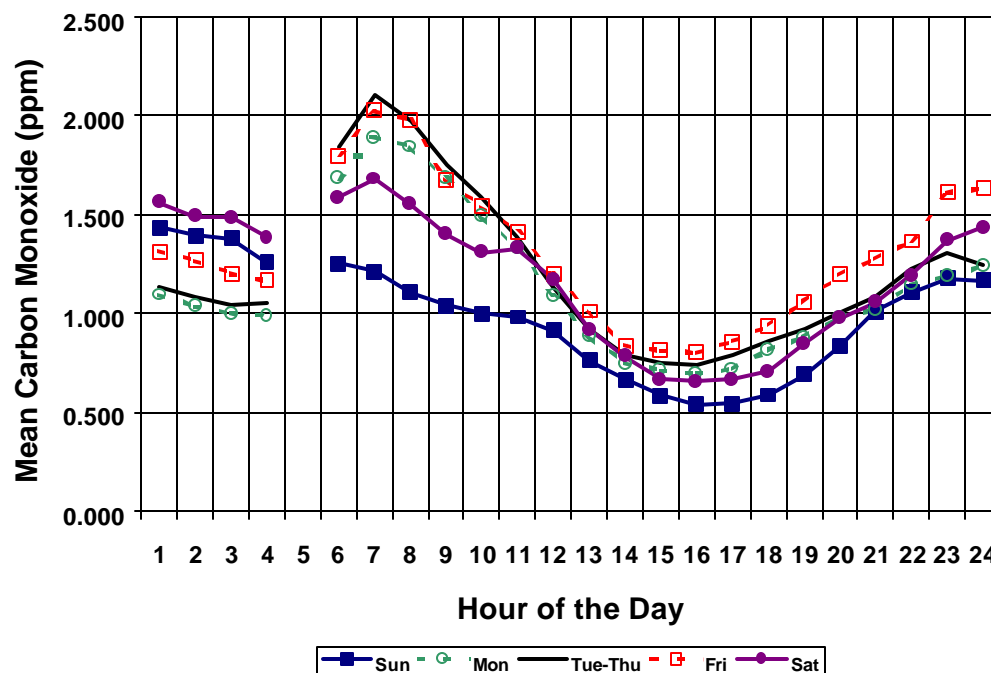

Figure 5.3-9 Nitrogen oxides profiles for Anaheim, expressed as a proportion of the midweek values.
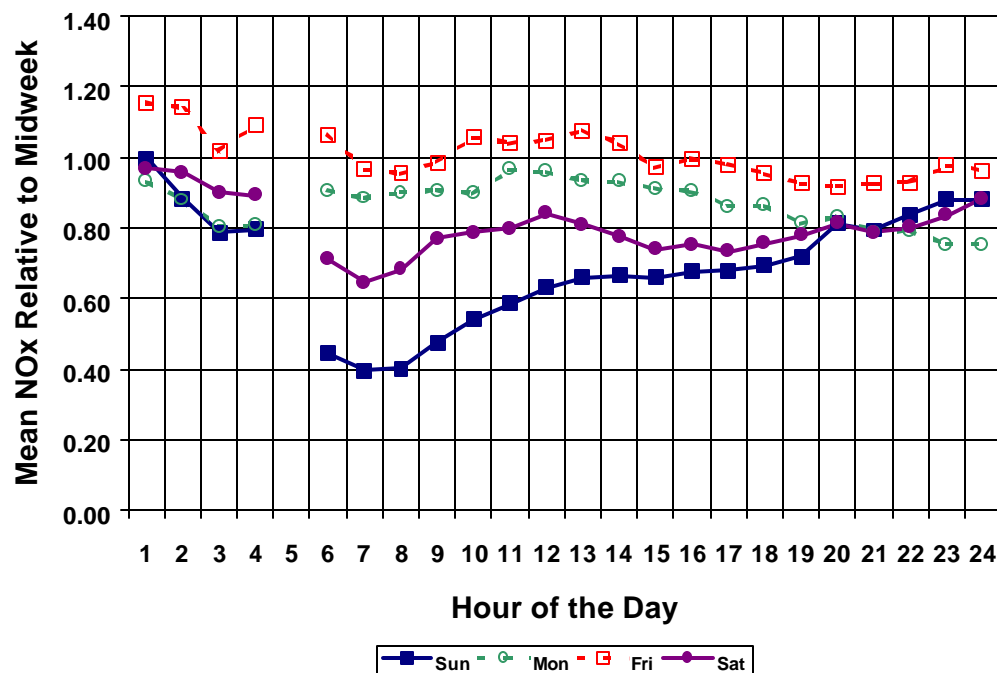
Figure 5.3-10 Ozone profiles by day of week at Anaheim, based on data for the May – October ozone seasons of 1996-1998.
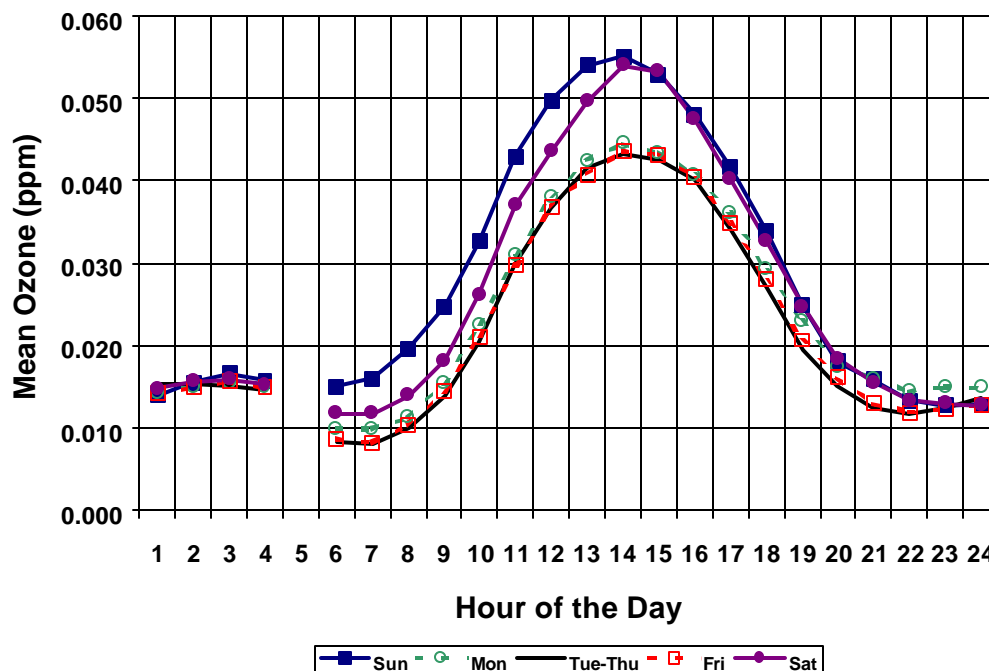
Figure 5.3-11 Ozone profiles for Anaheim, expressed as a proportion of the midweek values.
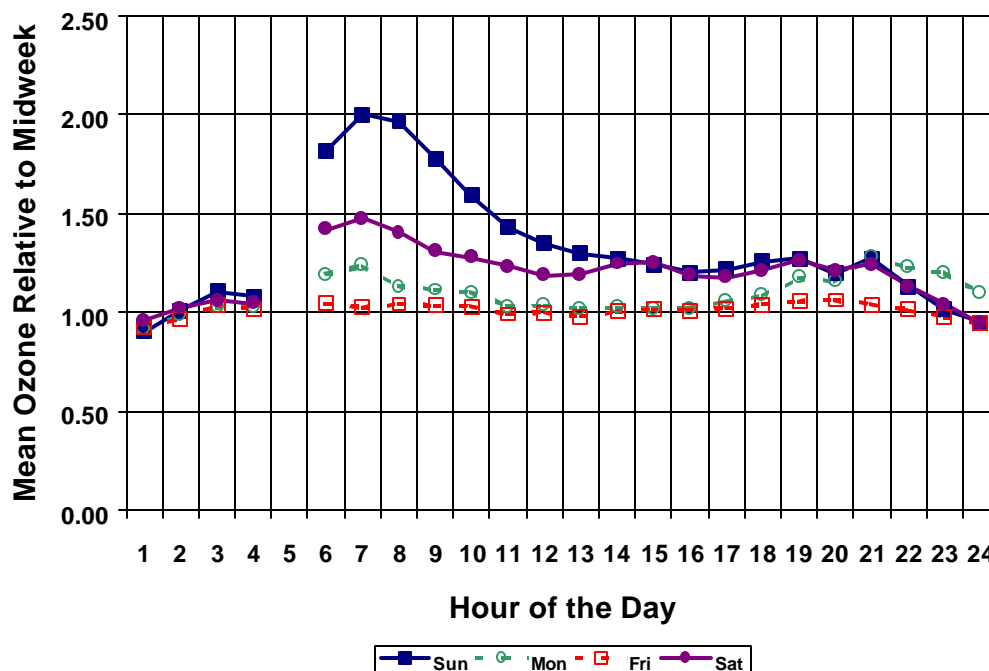
Figure 5.3-12 Carbon monoxide profiles by day of week at Azusa, based on data for the May – October ozone seasons of 1996-1998.
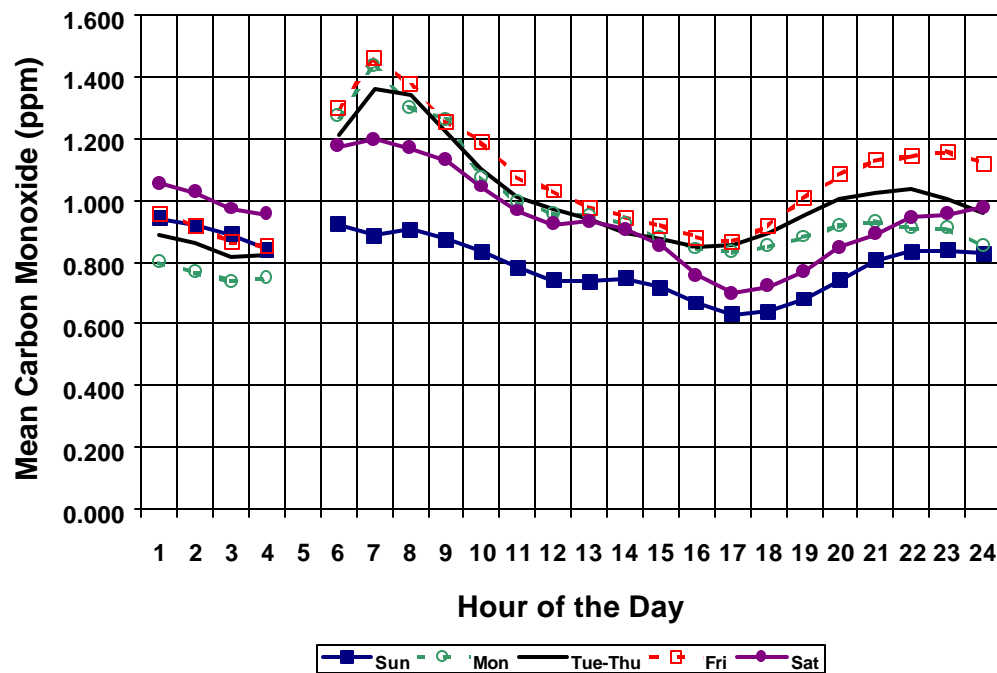
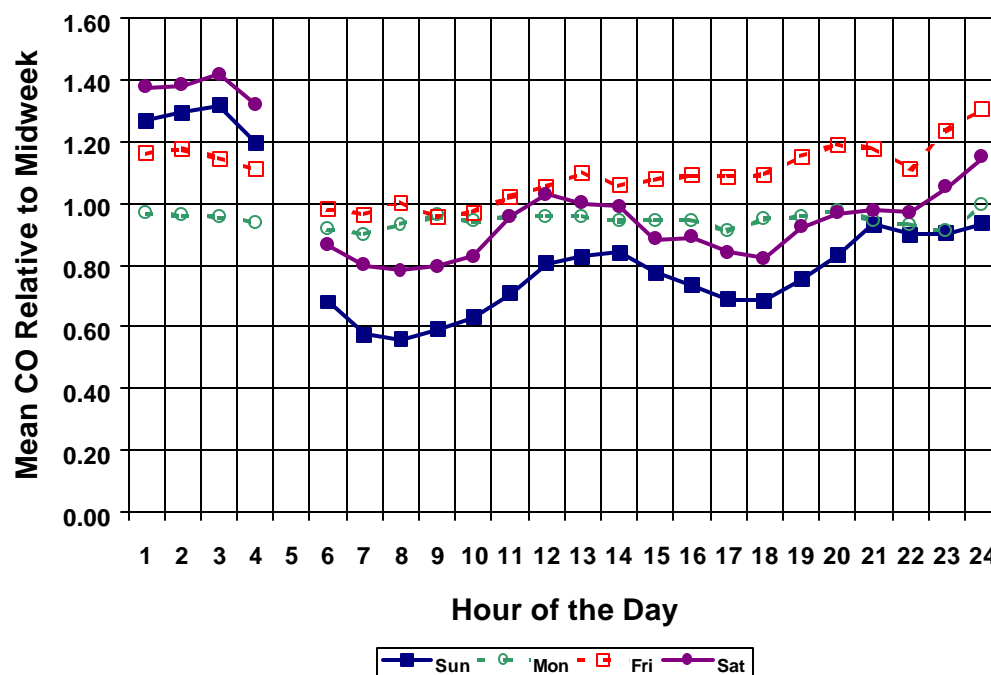**Figure 5.3-13 Carbon monoxide profiles for Azusa, expressed as a proportion of the midweek values.**
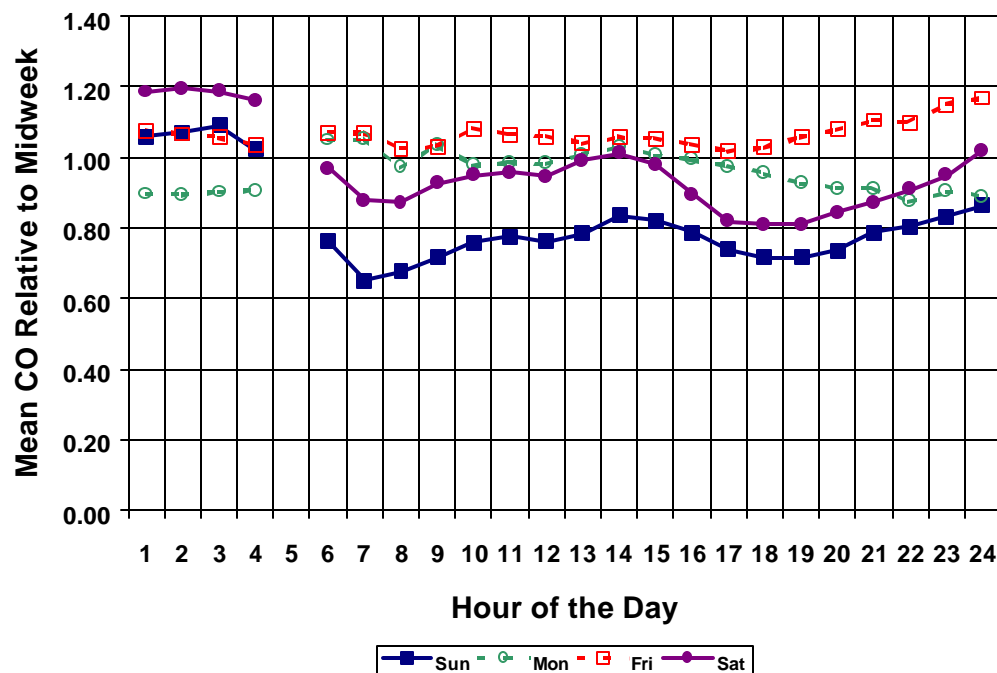
Figure 5.3-14 Nitrogen oxides profiles by day of week at Azusa, based on data for the May – October ozone seasons of 1996-1998.
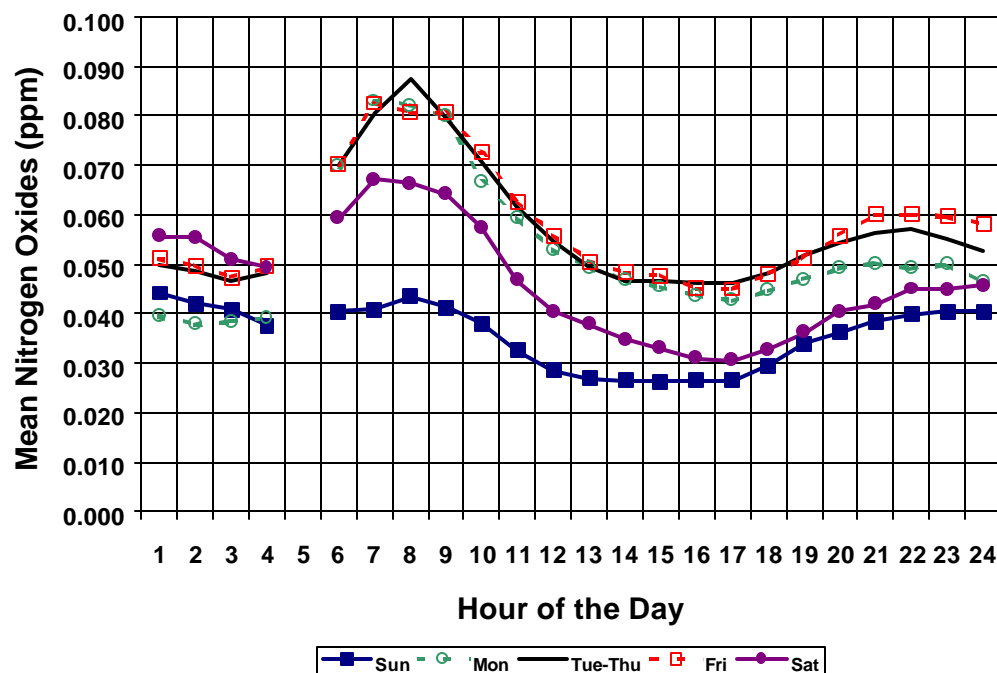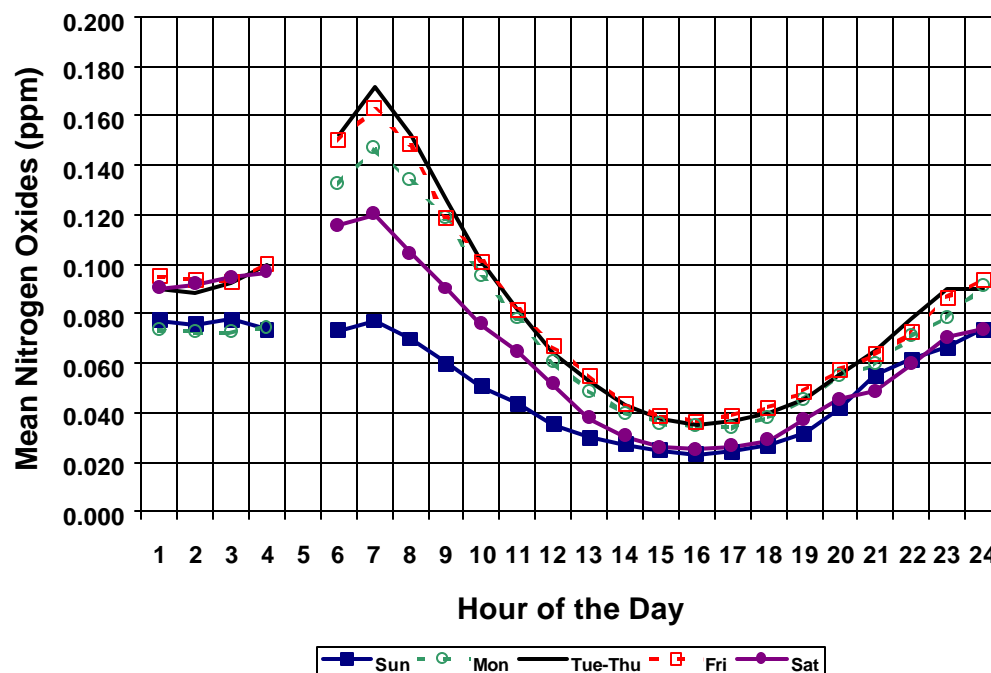

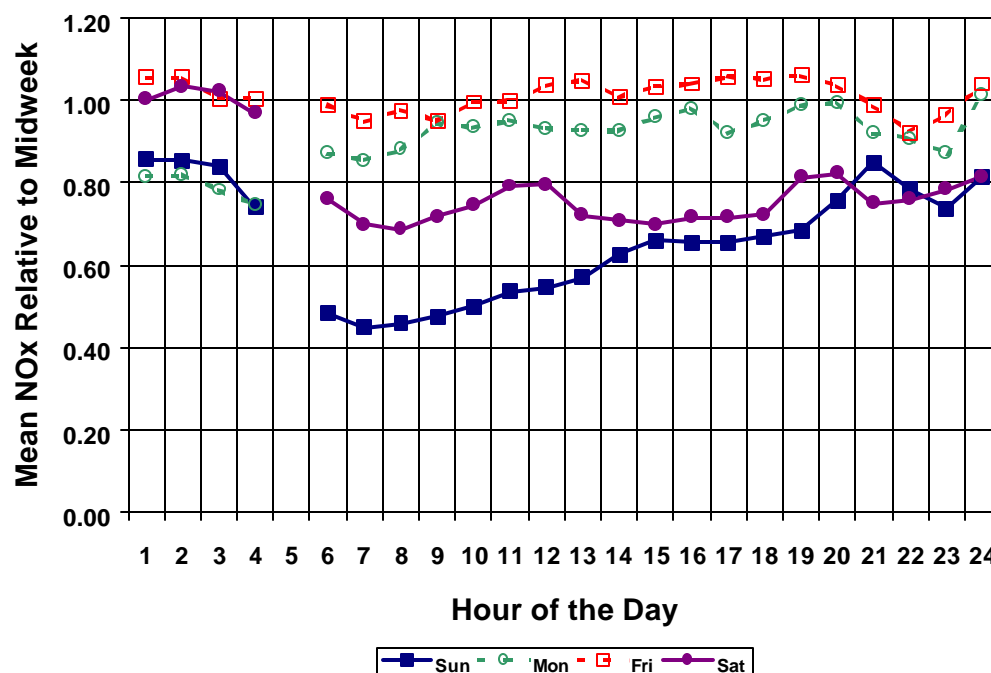**Figure 5.3-15 Nitrogen oxides profiles for Azusa, expressed as a proportion of the midweek values.**
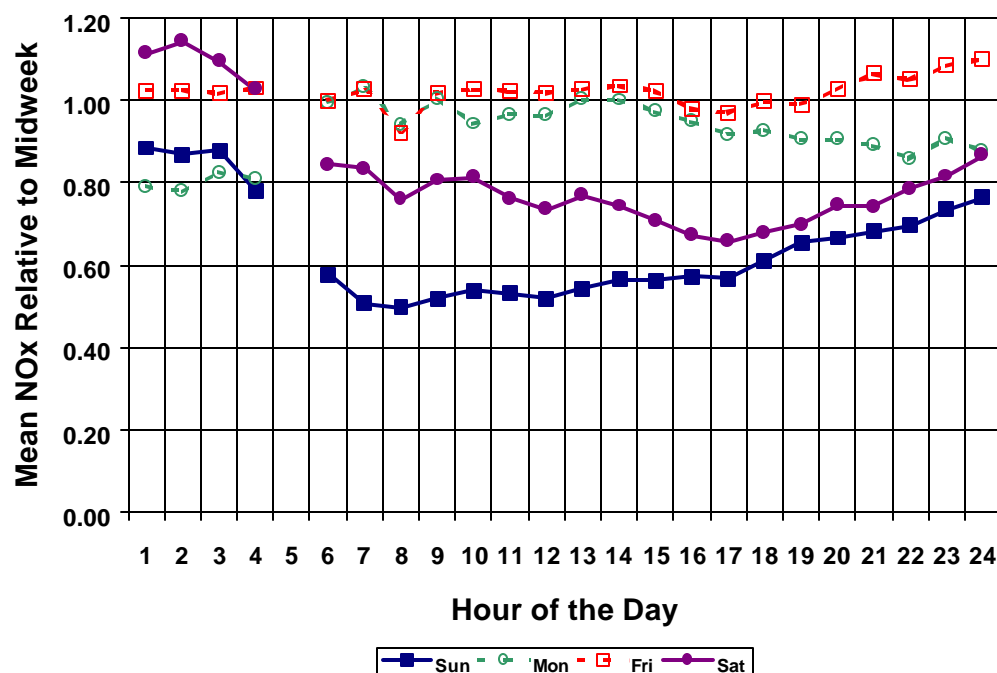
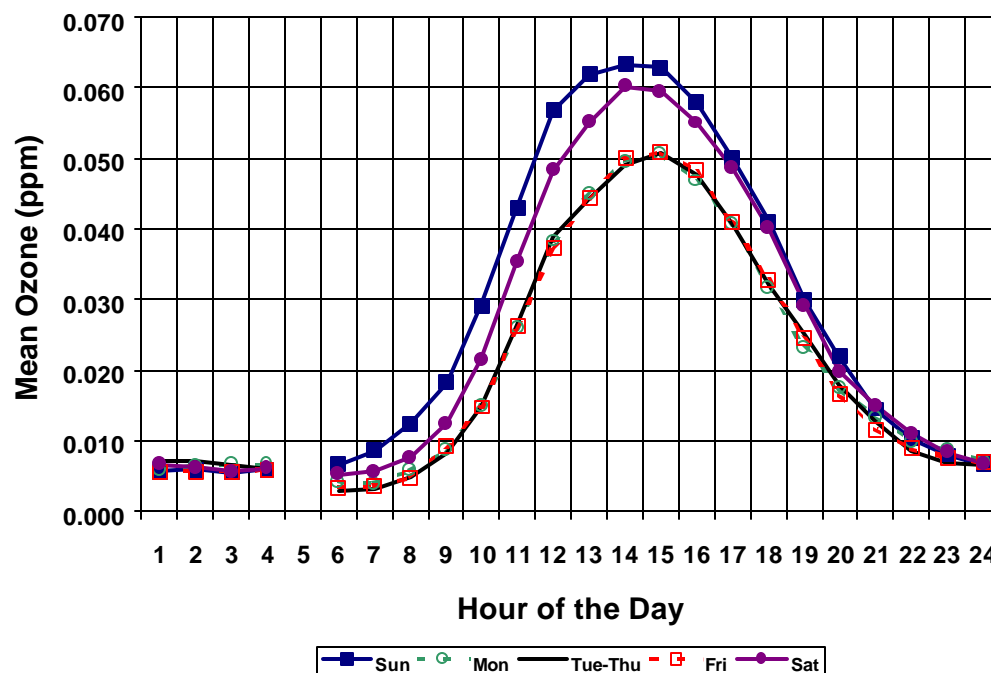**Figure 5.3-16 Ozone profiles by day of week at Azusa, based on data for the May – October ozone seasons of 1996-1998.**
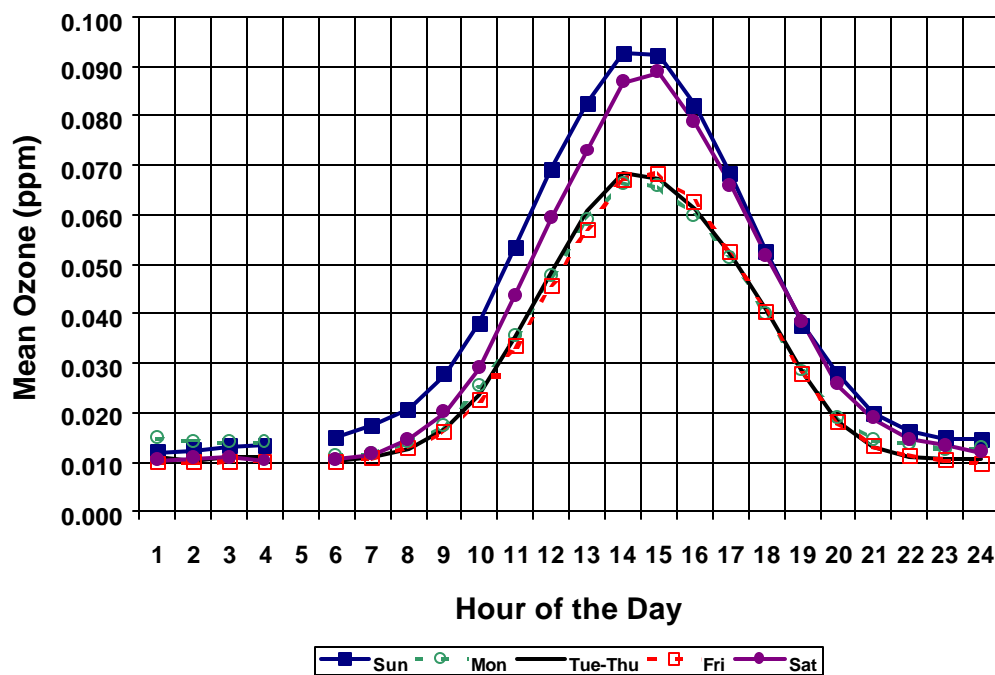
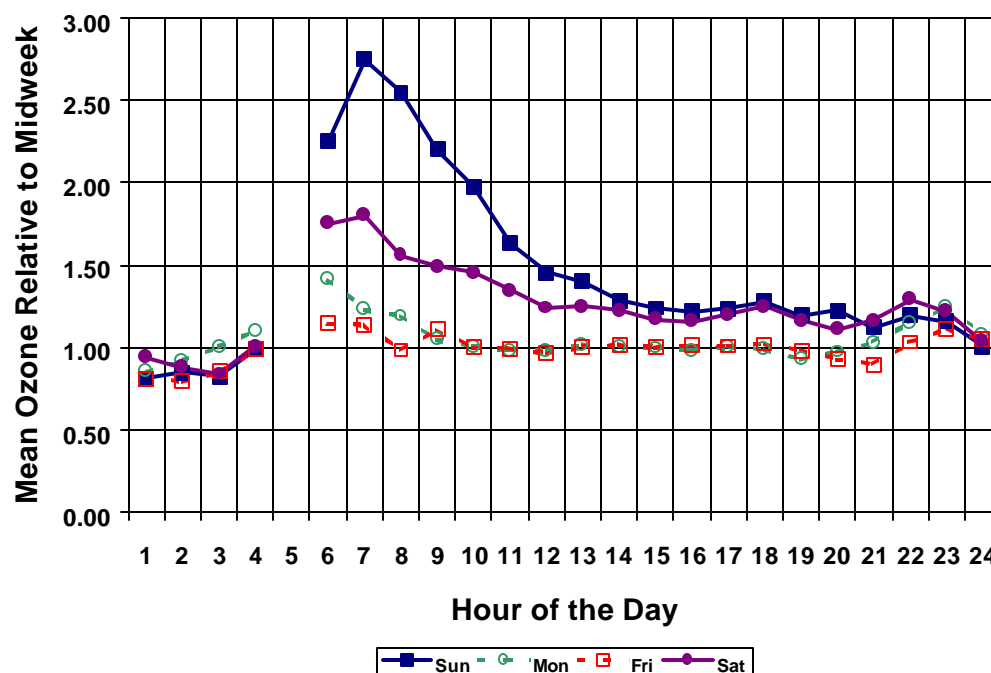**Figure 5.3-17 Ozone profiles for Azusa, expressed as a proportion of the midweek values.**
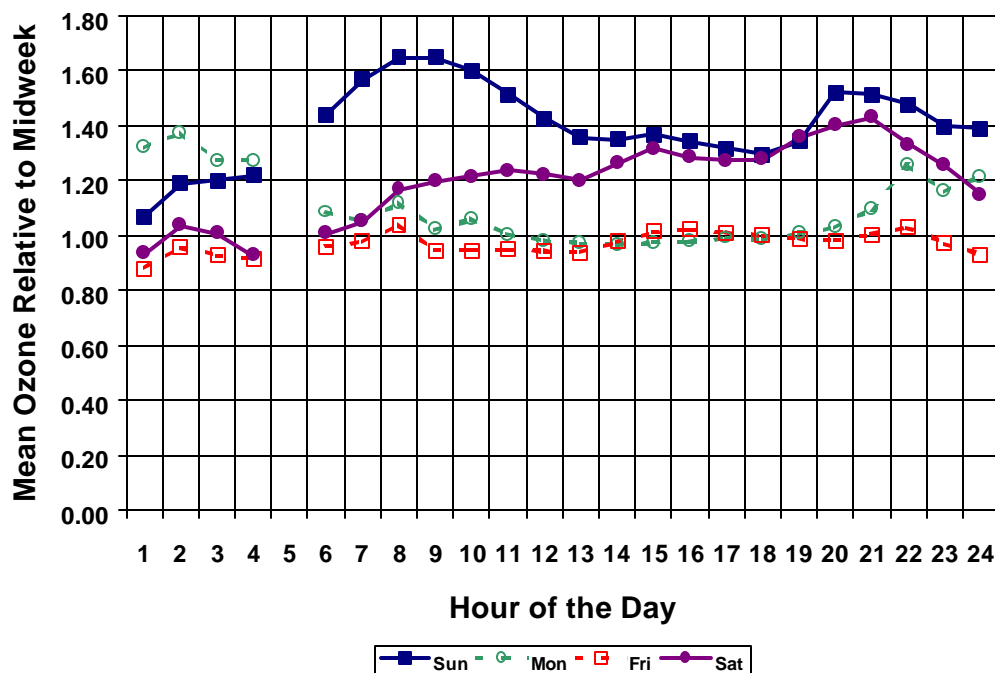
Figure 5.3-18 Carbon monoxide profiles by day of week at Burbank, based on data for the May – October ozone seasons of 1996-1998.
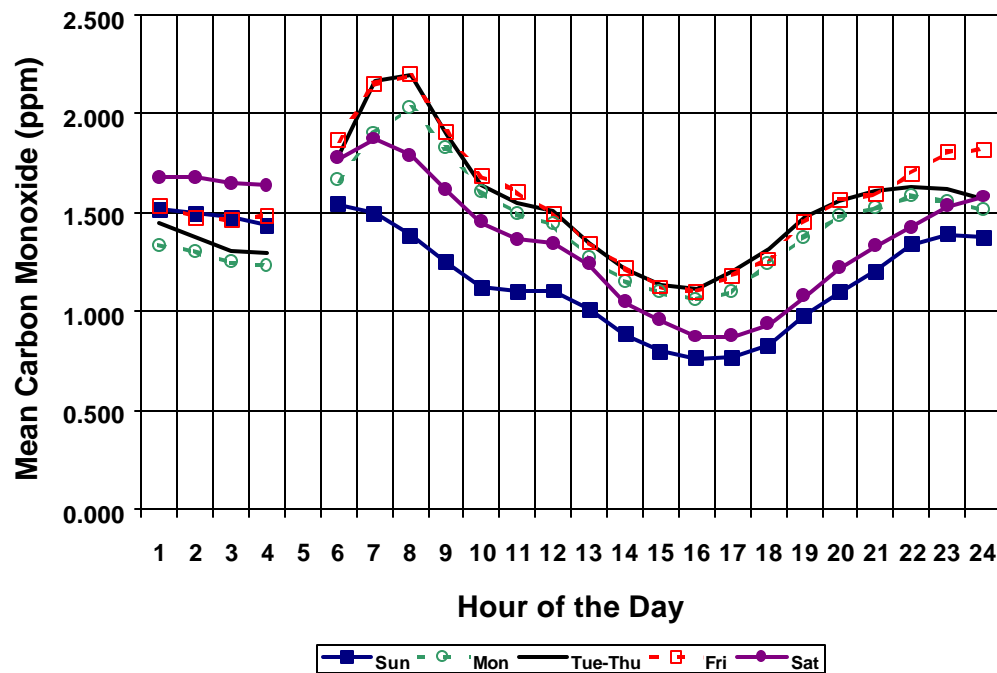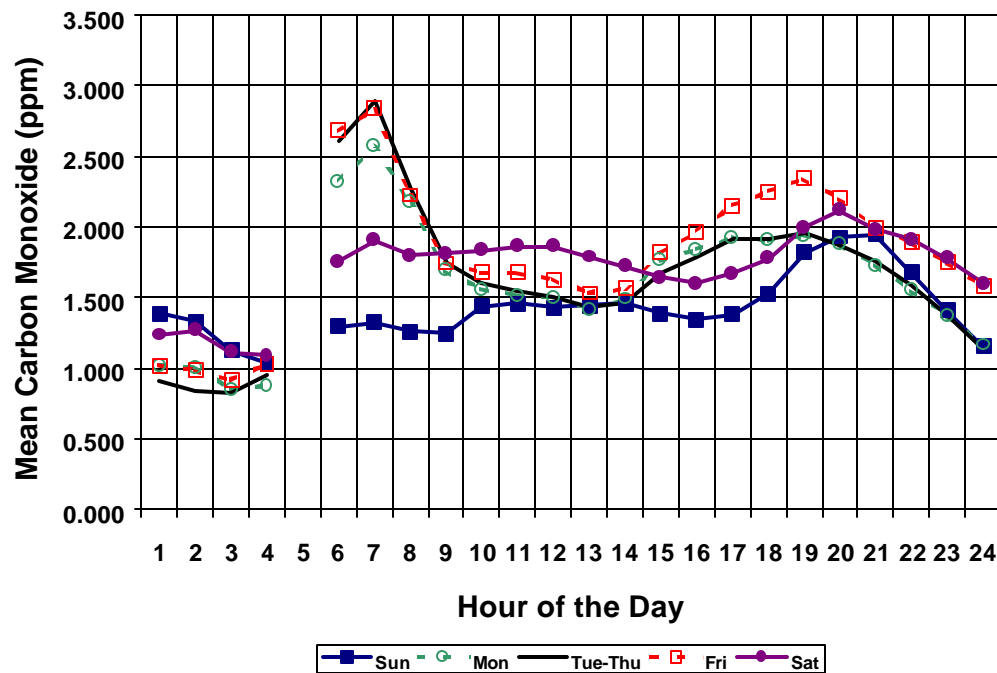

Figure 5.3-19 Carbon monoxide profiles for Burbank, expressed as a proportion of the midweek values.
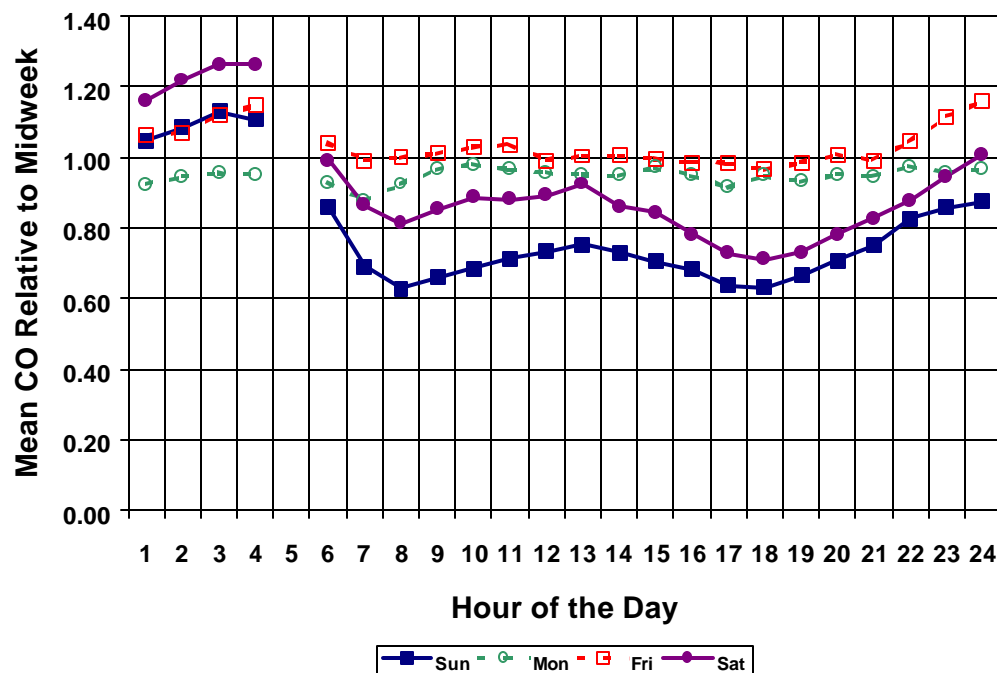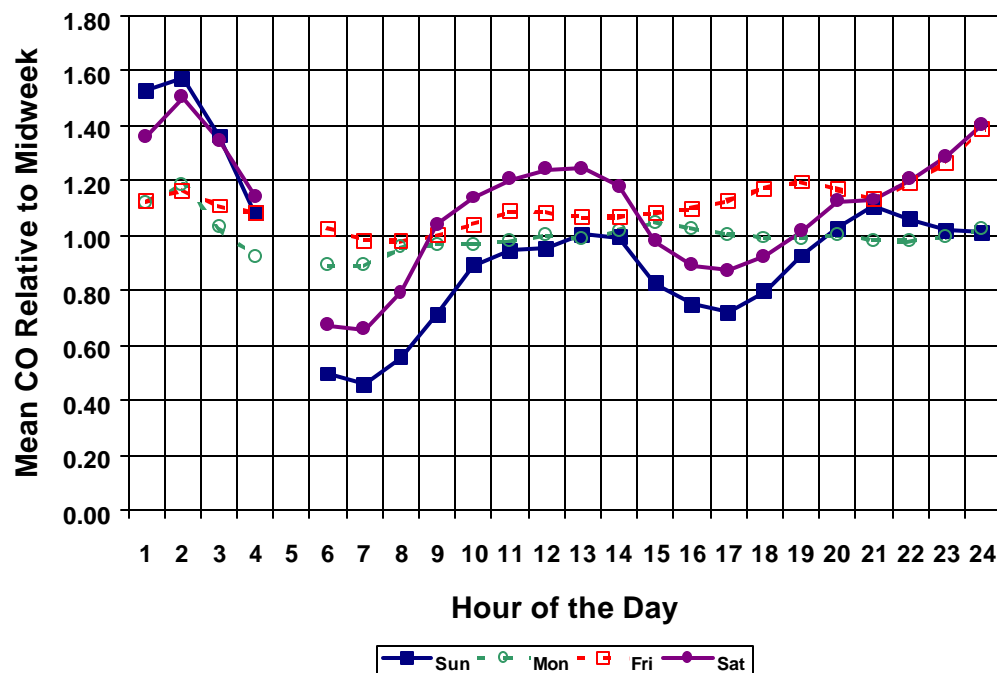
Figure 5.3-20 Nitrogen oxides profiles by day of week at Burbank, based on data for the May – October ozone seasons of 1996-1998.
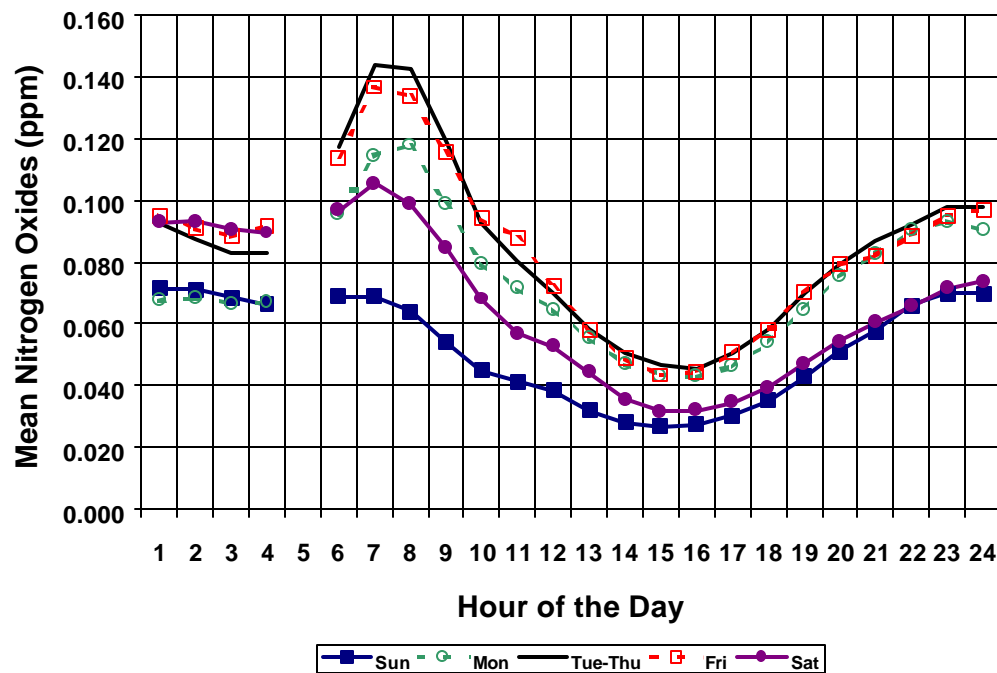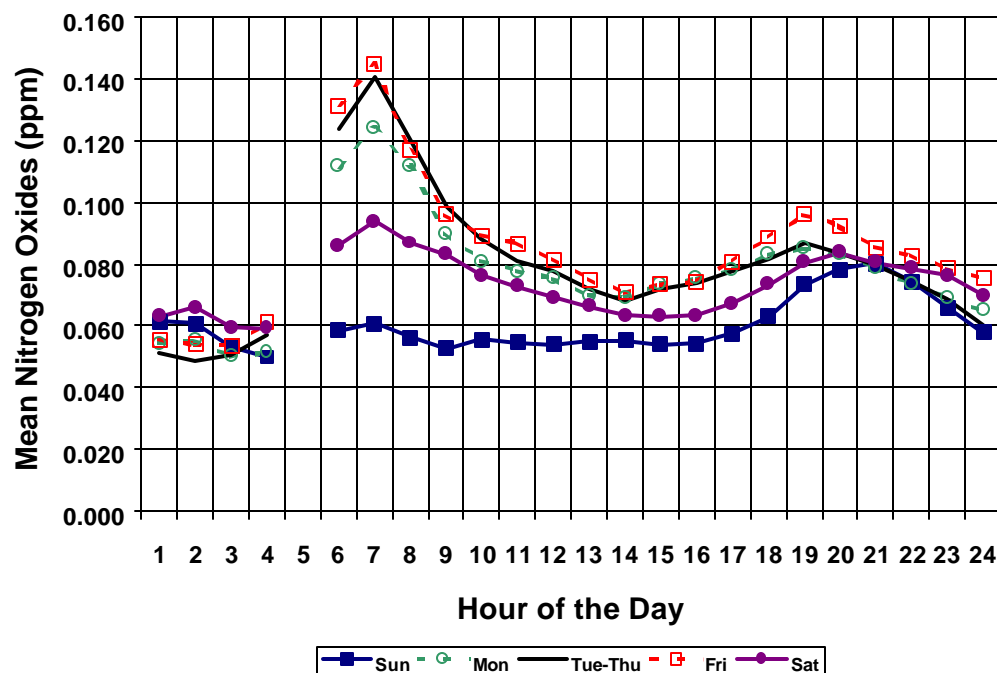

Figure 5.3-21 Nitrogen oxides profiles for Burbank, expressed as a proportion of the midweek values.
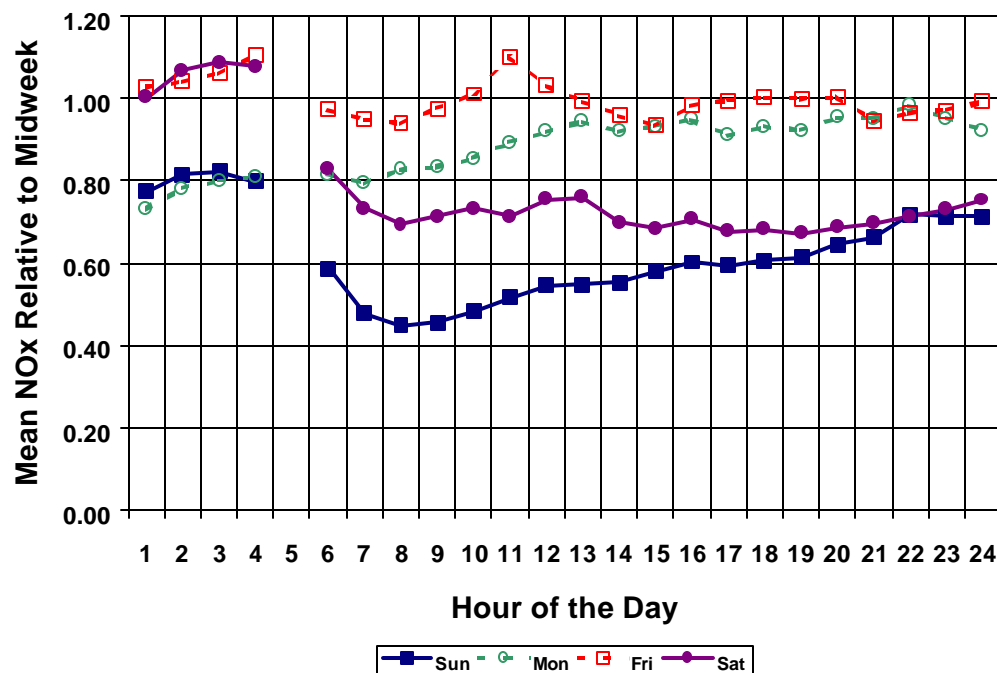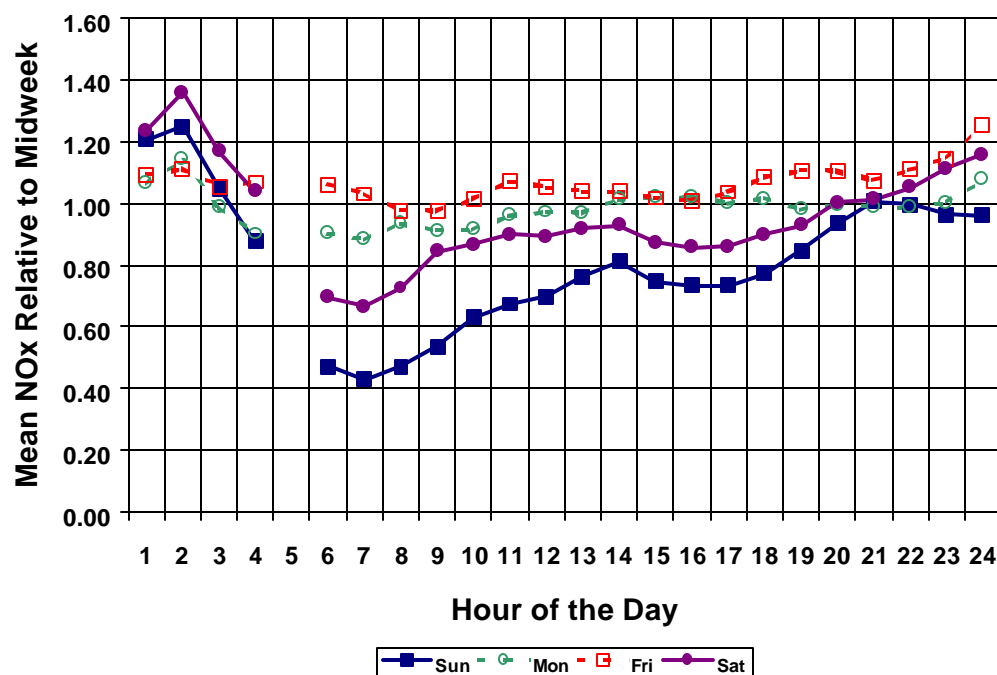
Figure 5.3-22 Ozone profiles by day of week at Burbank, based on data for the May – October ozone seasons of 1996-1998.
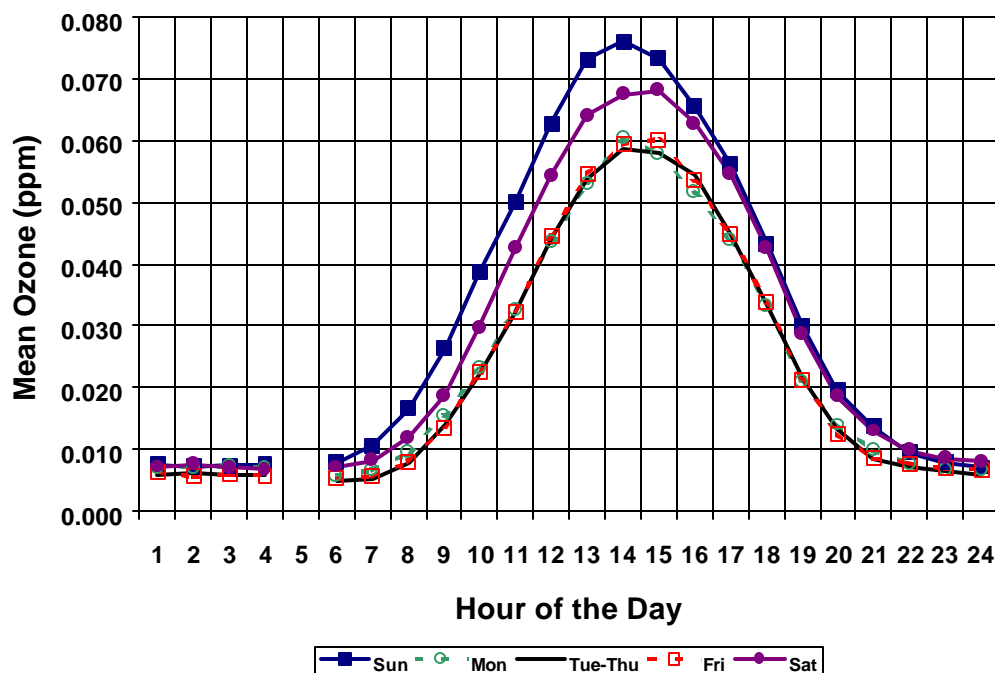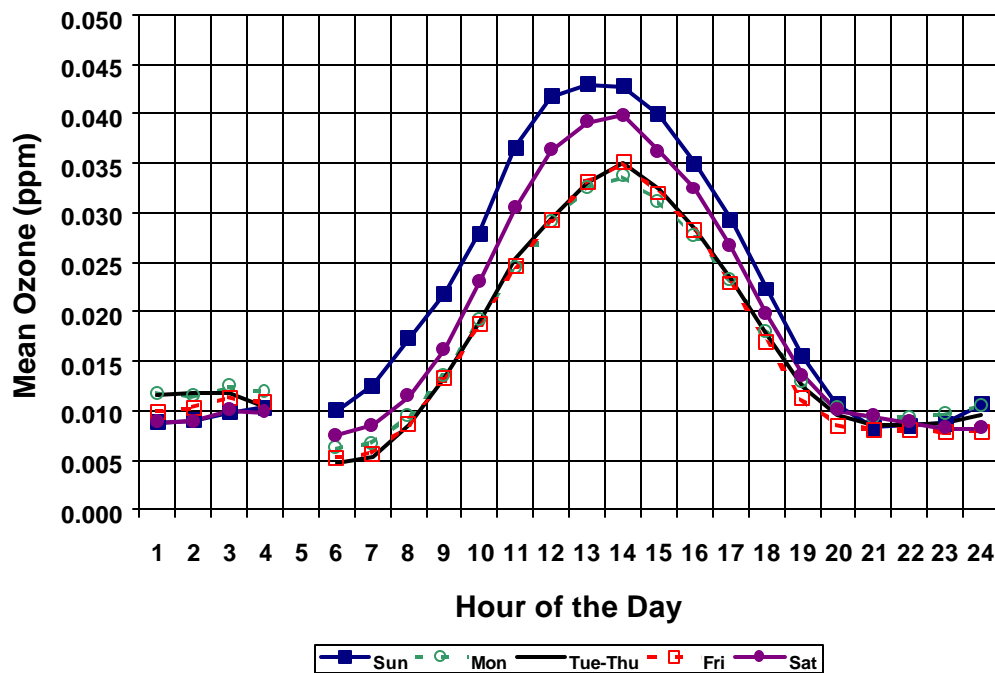

Figure 5.3-23 Ozone profiles for Burbank, expressed as a proportion of the midweek values.

Figure 5.3-24 Carbon monoxide profiles by day of week at Hawthorne, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-25 Carbon monoxide profiles for Hawthorne, expressed as a proportion of the midweek values.

Figure 5.3-26 Nitrogen oxides profiles by day of week at Hawthorne, based on data for the May – October ozone seasons of 1996-1998.
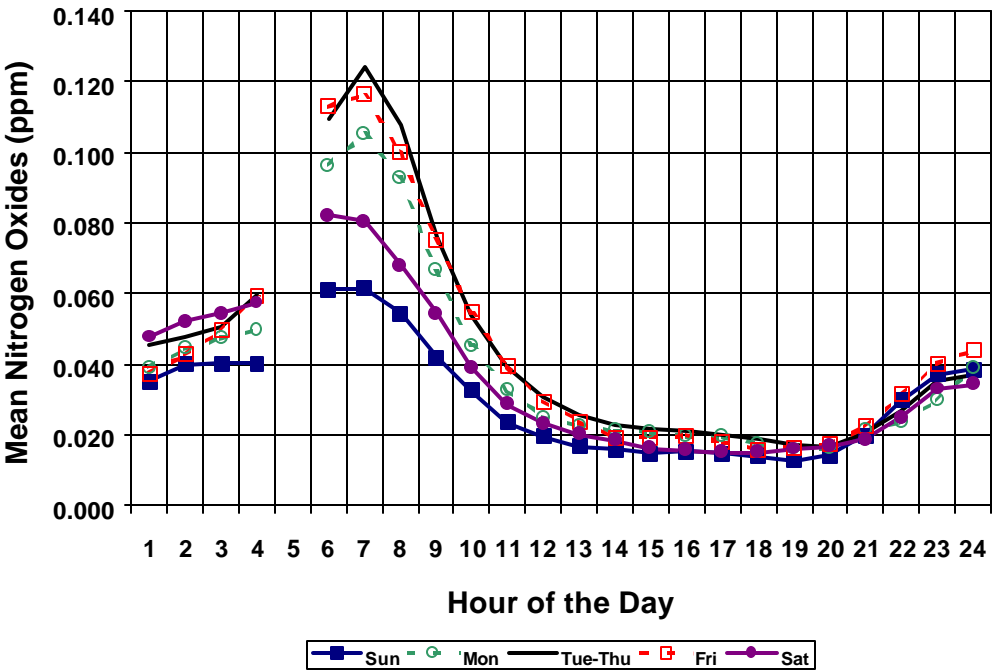
Figure 5.3-27 Nitrogen oxides profiles for Hawthorne, expressed as a proportion of the midweek values.
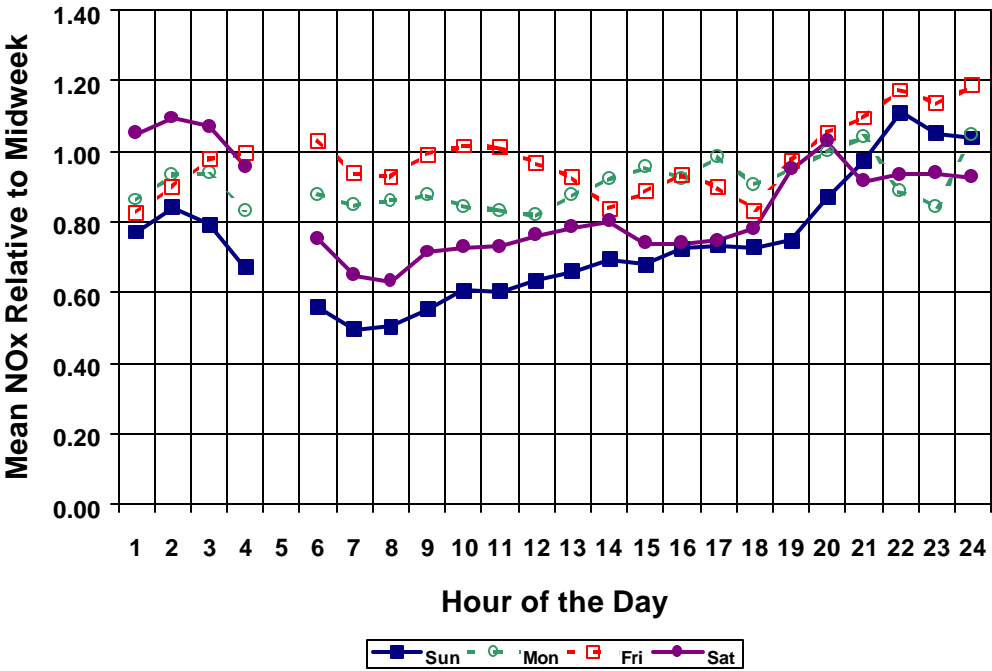
**Figure 5.3-28 Ozone profiles by day of week at Hawthorne,
based on data for the May – October ozone seasons of 1996-1998.**
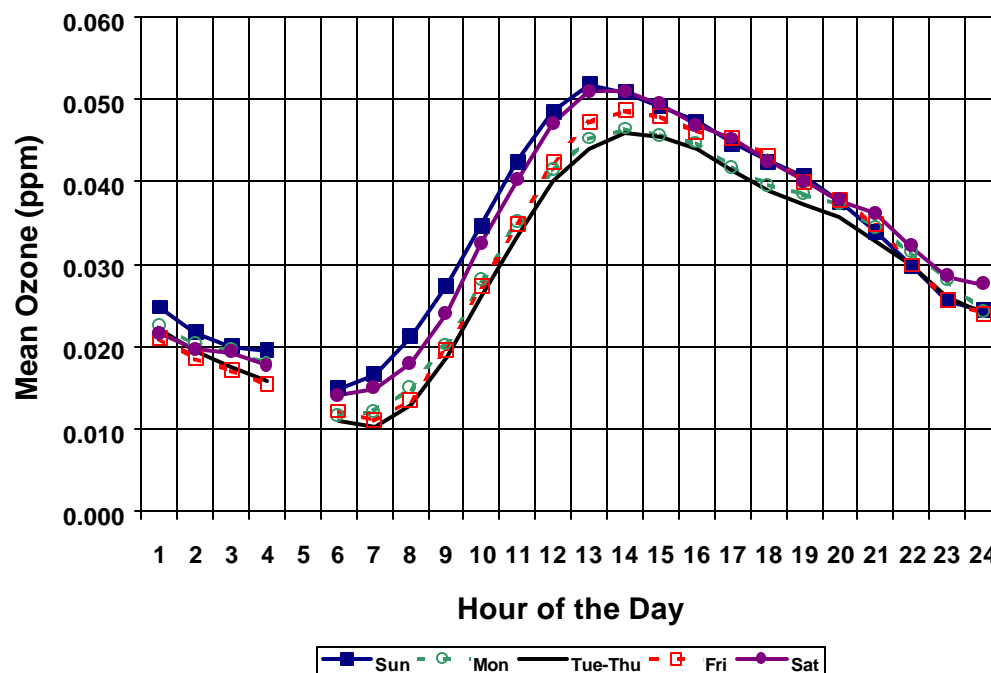
**Figure 5.3-29 Ozone profiles for Hawthorne,
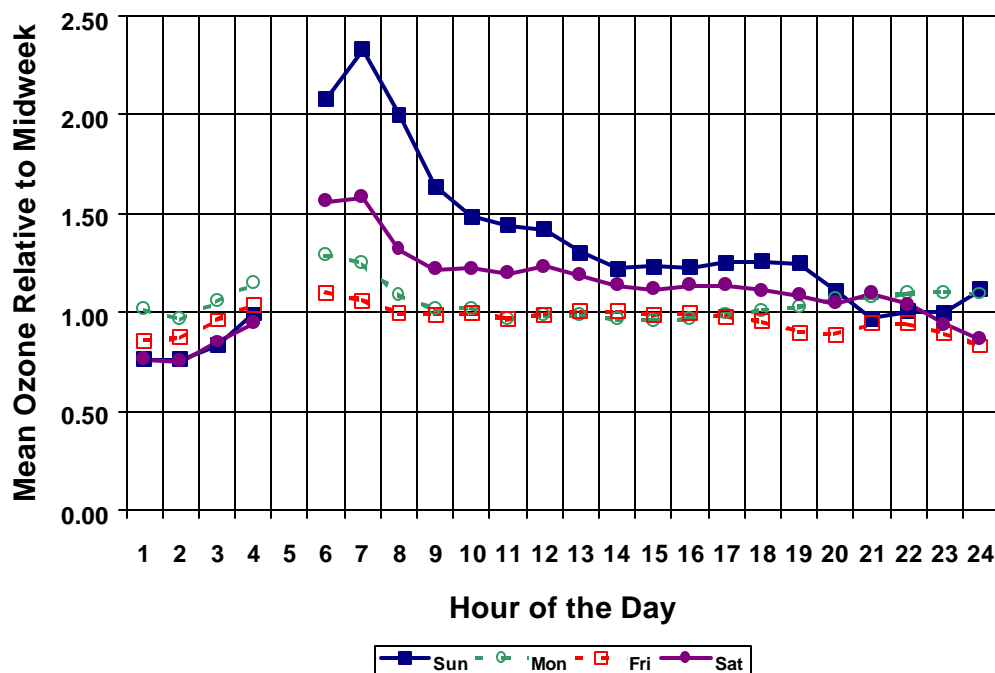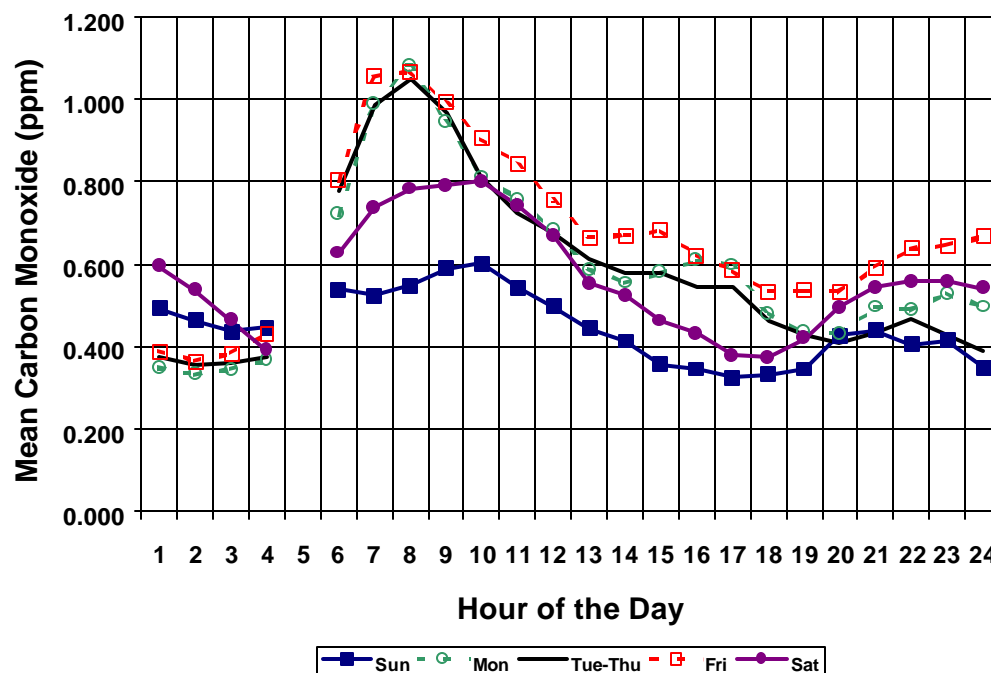expressed as a proportion of the midweek values.**
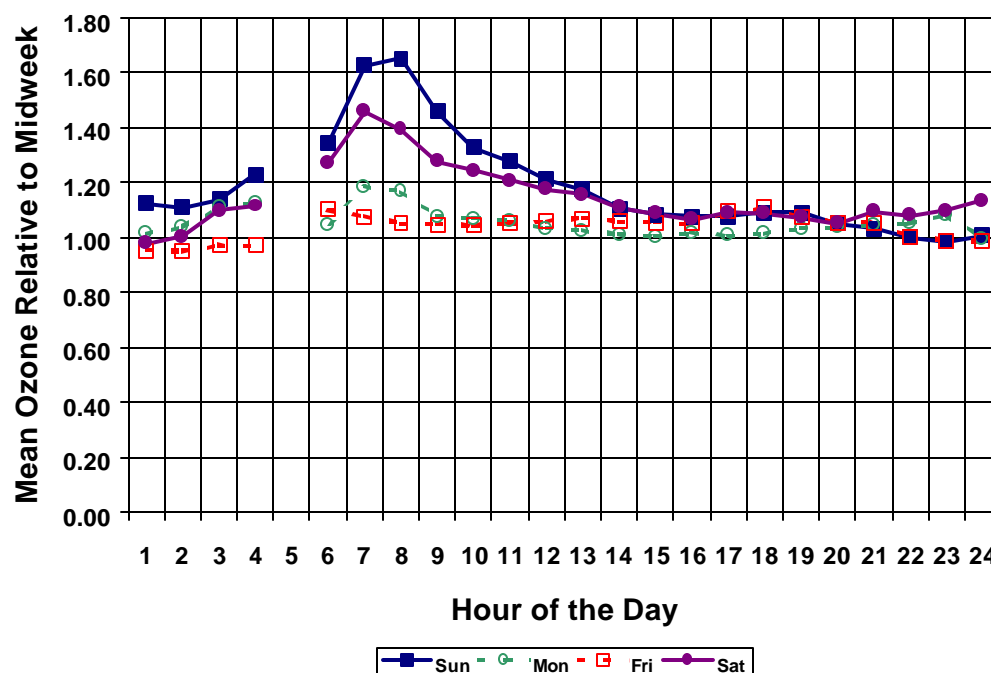
Figure 5.3-30 Carbon monoxide profiles by day of week at Irvine (El Toro), based on data for the May – October ozone seasons of 1996-1998.

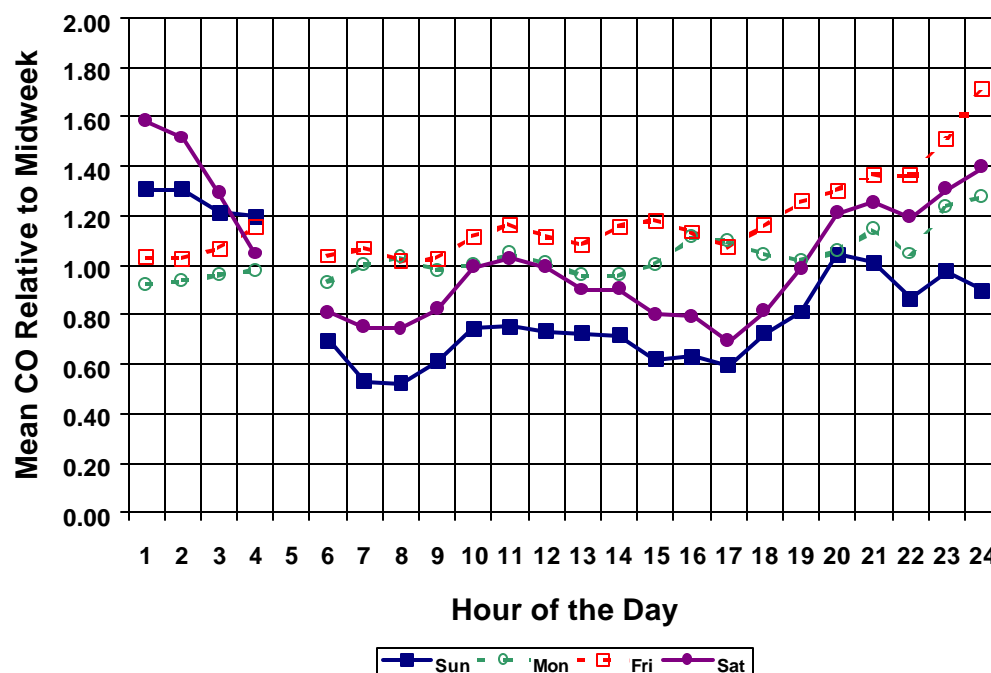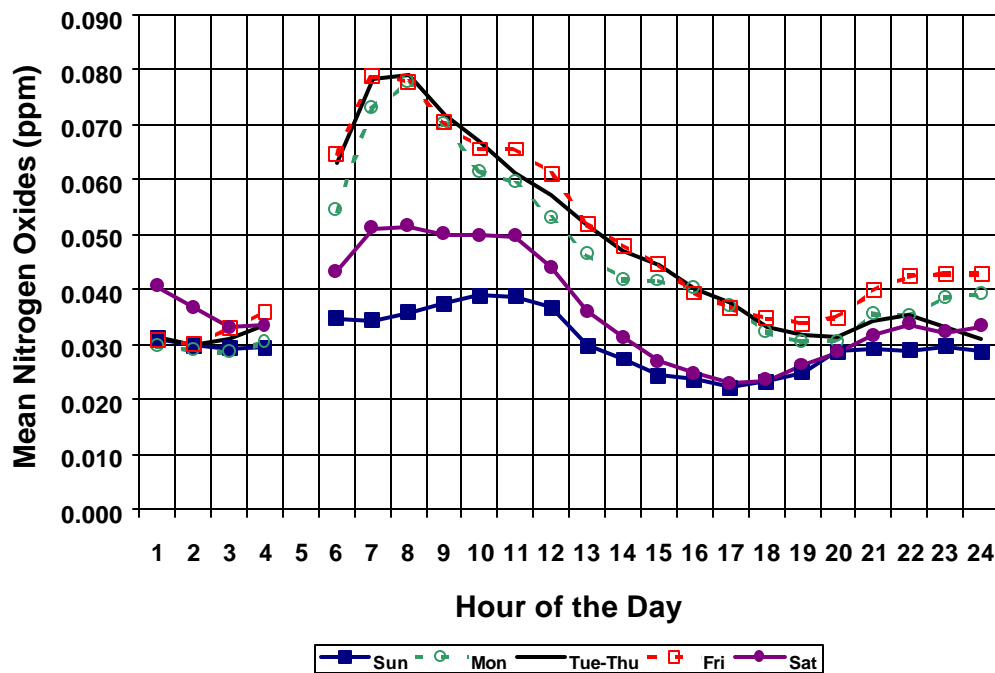**Figure 5.3-31 Carbon monoxide profiles for Irvine (El Toro), expressed as a proportion of the midweek values.**

Figure 5.3-32 Ozone profiles by day of week at Irvine (El Toro), based on data for the May – October ozone seasons of 1996-1998.

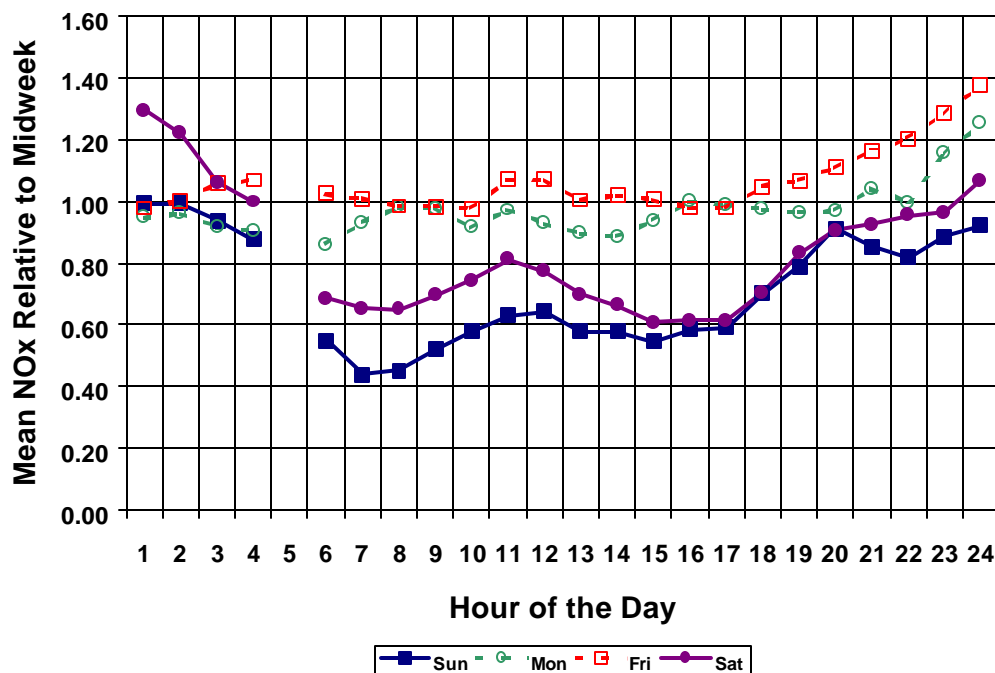**Figure 5.3-33 Ozone profiles for Irvine (El Toro), expressed as a proportion of the midweek values.**

Figure 5.3-34 Carbon monoxide profiles by day of week at L.A. – N. Main, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-35 Carbon monoxide profiles for L.A. – N. Main, expressed as a proportion of the midweek values.

Figure 5.3-36 Nitrogen oxides profiles by day of week at L.A. – N. Main, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-37 Nitrogen oxides profiles for L.A. – N. Main, expressed as a proportion of the midweek values.

**Figure 5.3-38 Ozone profiles by day of week at L.A. – N. Main,
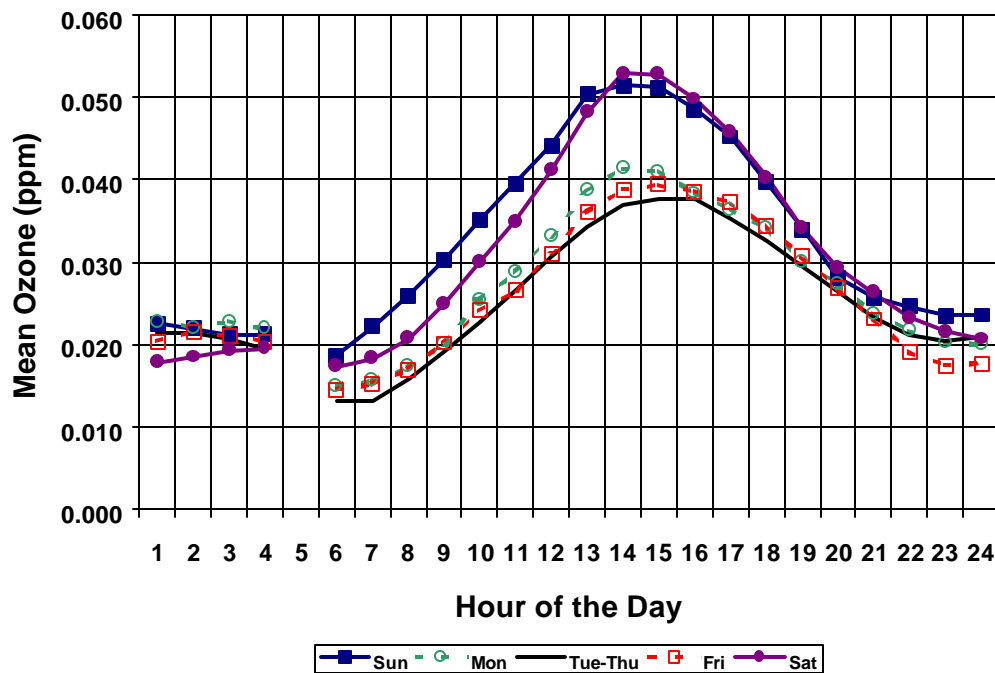based on data for the May – October ozone seasons of 1996-1998.**

**Figure 5.3-39 Ozone profiles for L.A. – N. Main,
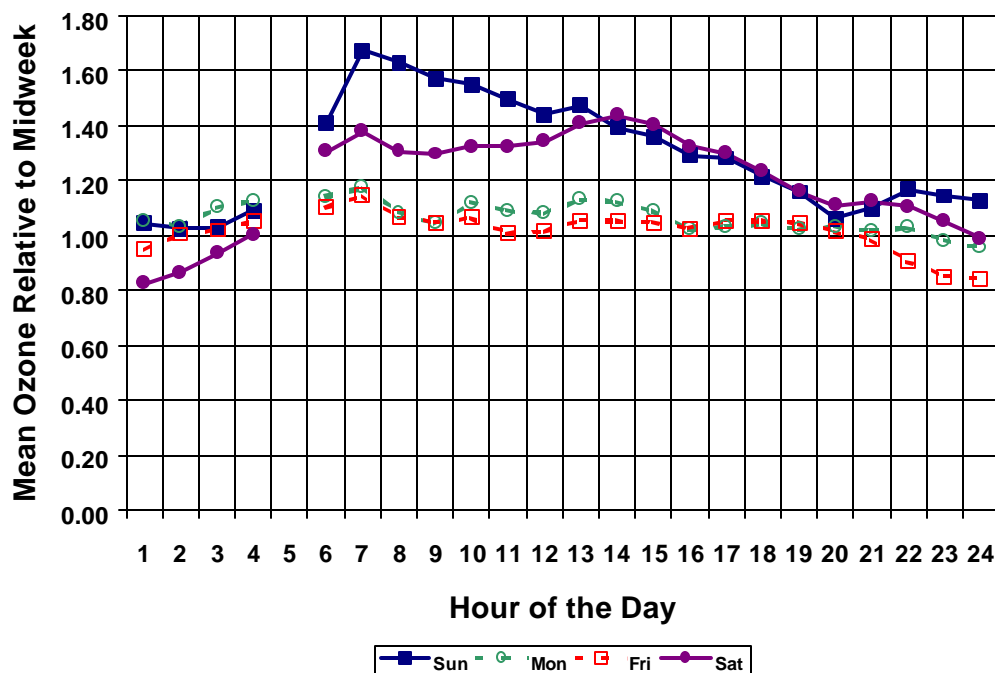expressed as a proportion of the midweek values.**

Figure 5.3-40 Carbon monoxide profiles by day of week at Lynwood, based on data for the May – October ozone seasons of 1996-1998.
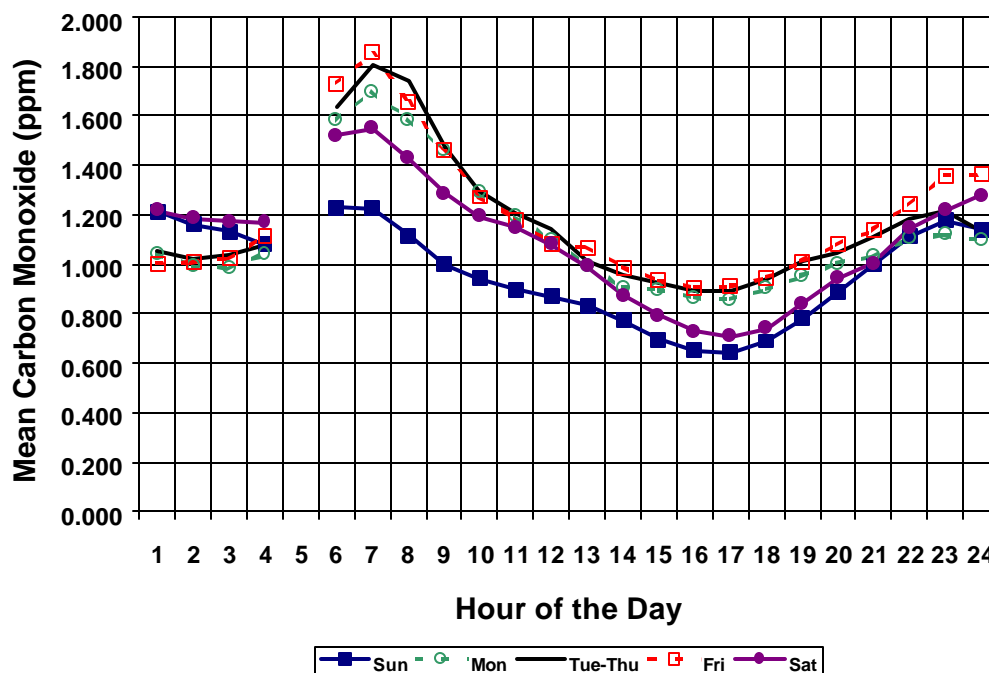

Figure 5.3-41 Carbon monoxide profiles for Lynwood, expressed as a proportion of the midweek values.
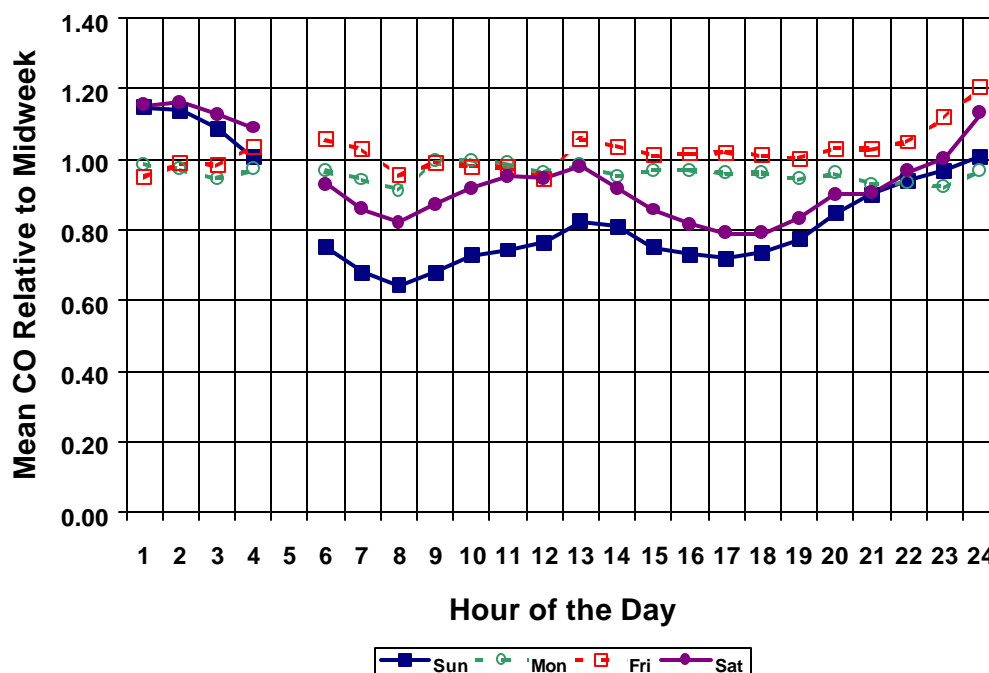
Figure 5.3-42 Nitrogen oxides profiles by day of week at Lynwood, based on data for the May – October ozone seasons of 1996-1998.
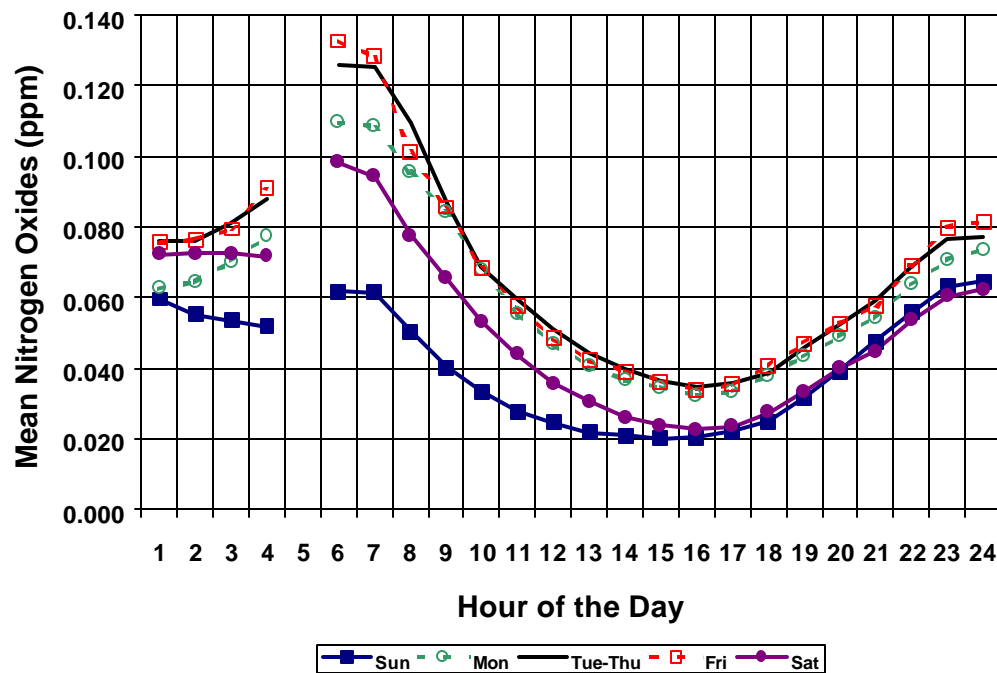

Figure 5.3-43 Nitrogen oxides profiles for Lynwood, expressed as a proportion of the midweek values.
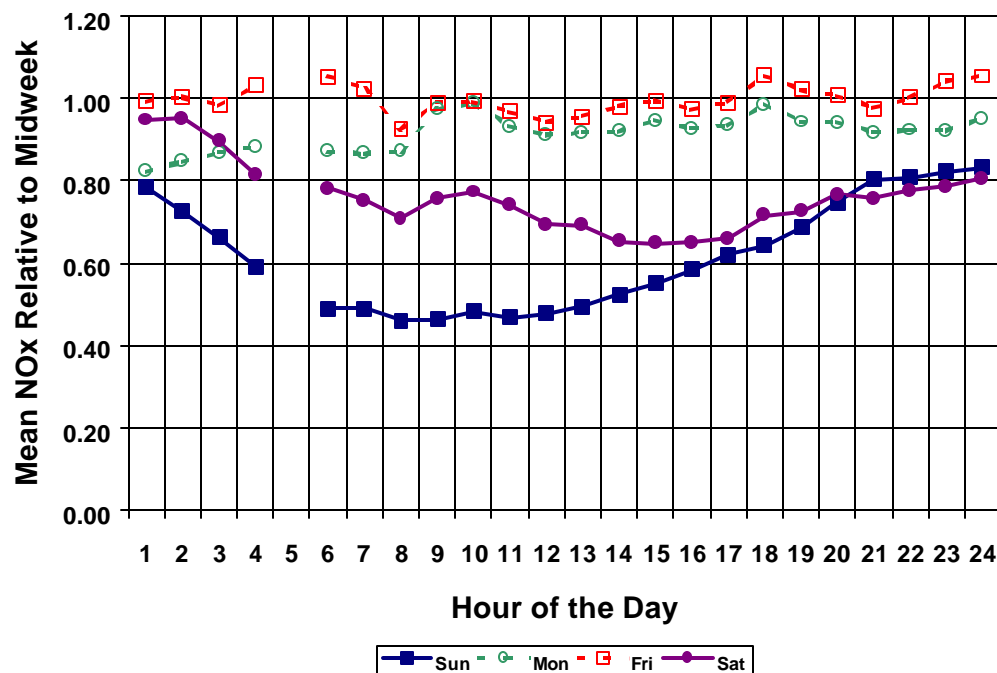
**Figure 5.3-44 Ozone profiles by day of week at Lynwood,
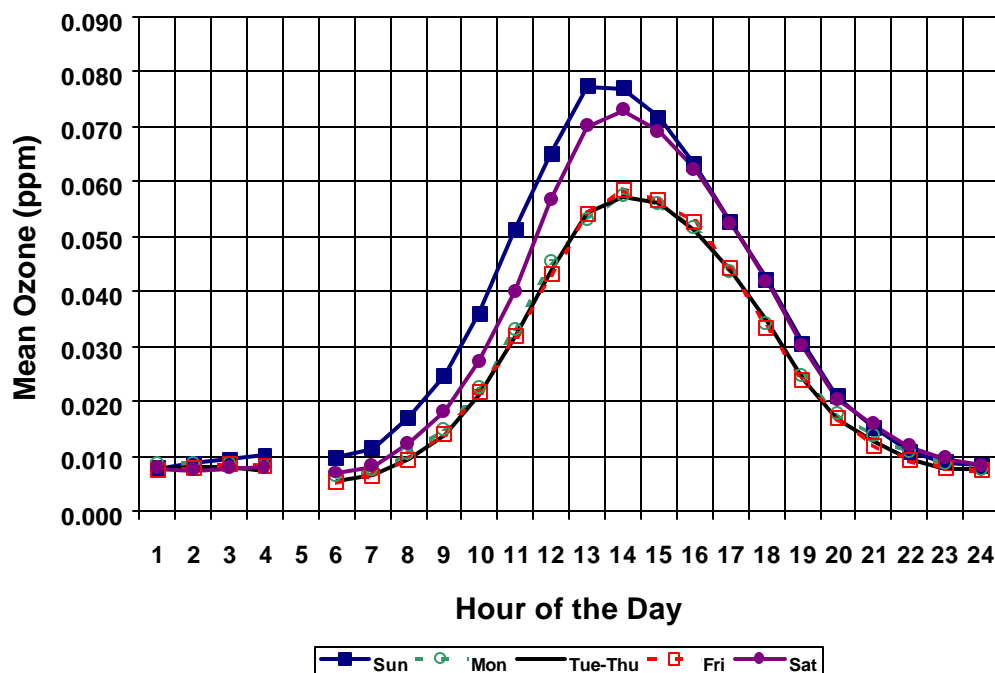based on data for the May – October ozone seasons of 1996-1998.**

**Figure 5.3-45 Ozone profiles for Lynwood,
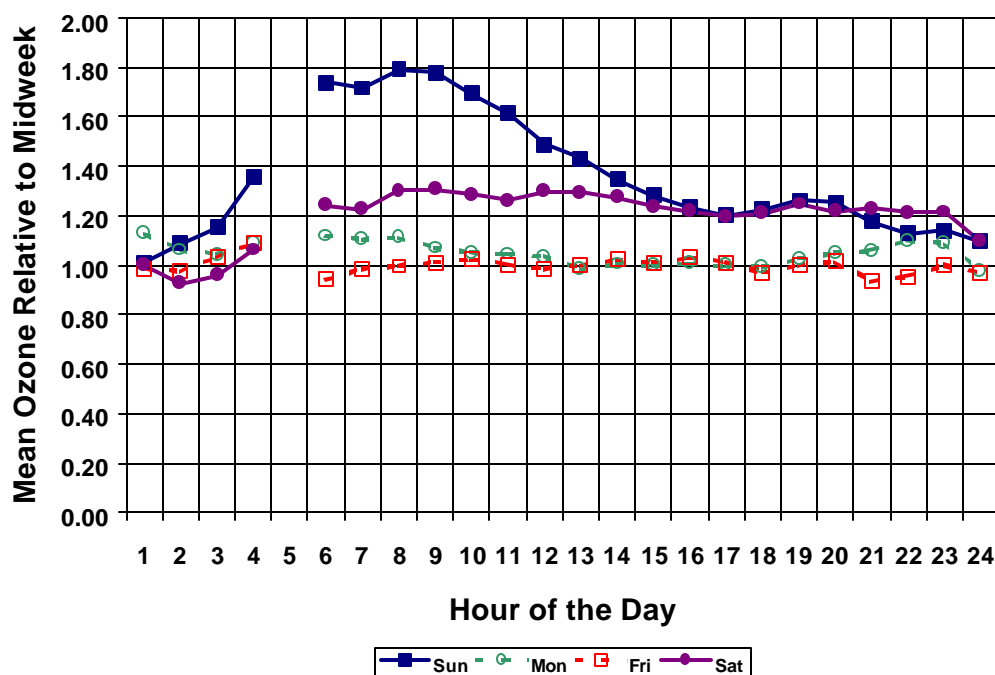expressed as a proportion of the midweek values.**

Figure 5.3-46 Carbon monoxide profiles by day of week at N. Long Beach, based on data for the May – October ozone seasons of 1996-1998.
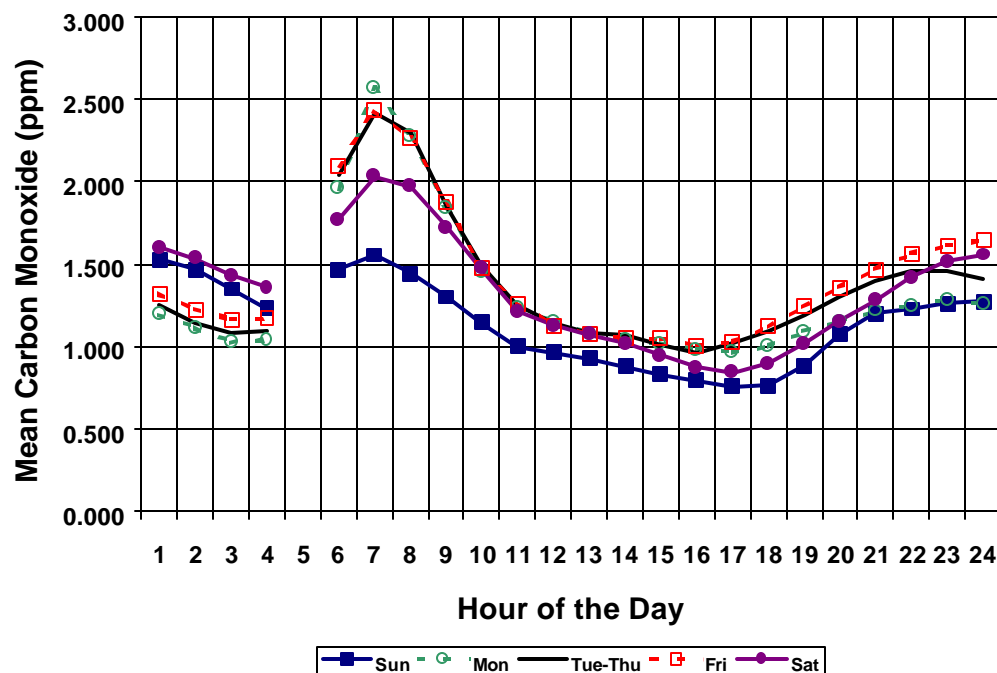

Figure 5.3-47 Carbon monoxide profiles for N. Long Beach, expressed as a proportion of the midweek values.

Figure 5.3-48 Nitrogen oxides profiles by day of week at N. Long Beach, based on data for the May – October ozone seasons of 1996-1998.

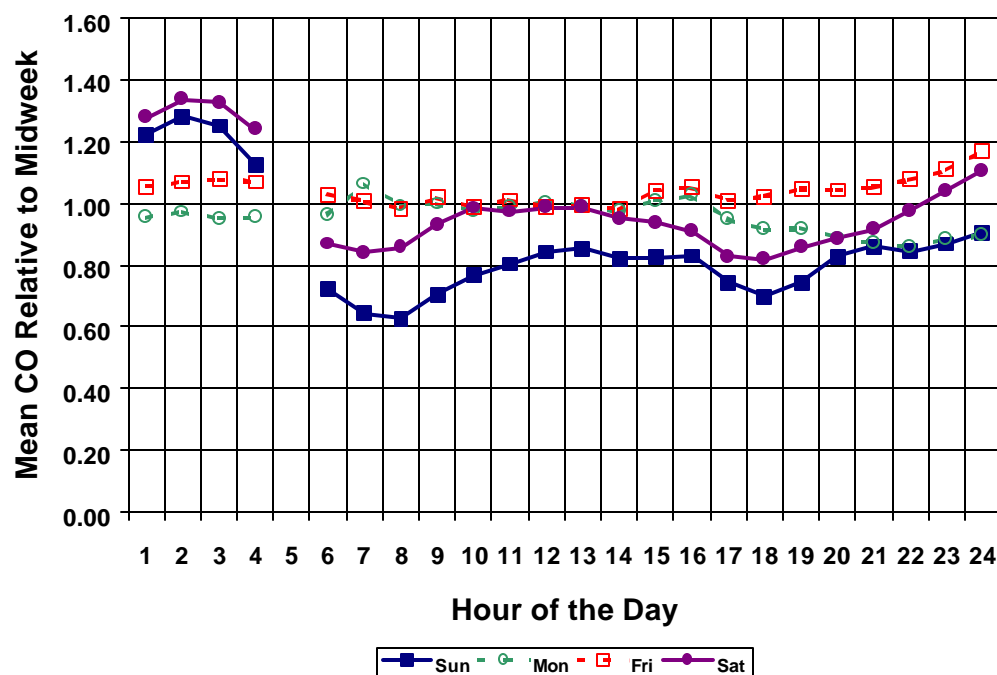**Figure 5.3-49 Nitrogen oxides profiles for N. Long Beach, expressed as a proportion of the midweek values.**

Figure 5.3-50 Ozone profiles by day of week at N. Long Beach, based on data for the May – October ozone seasons of 1996-1998.
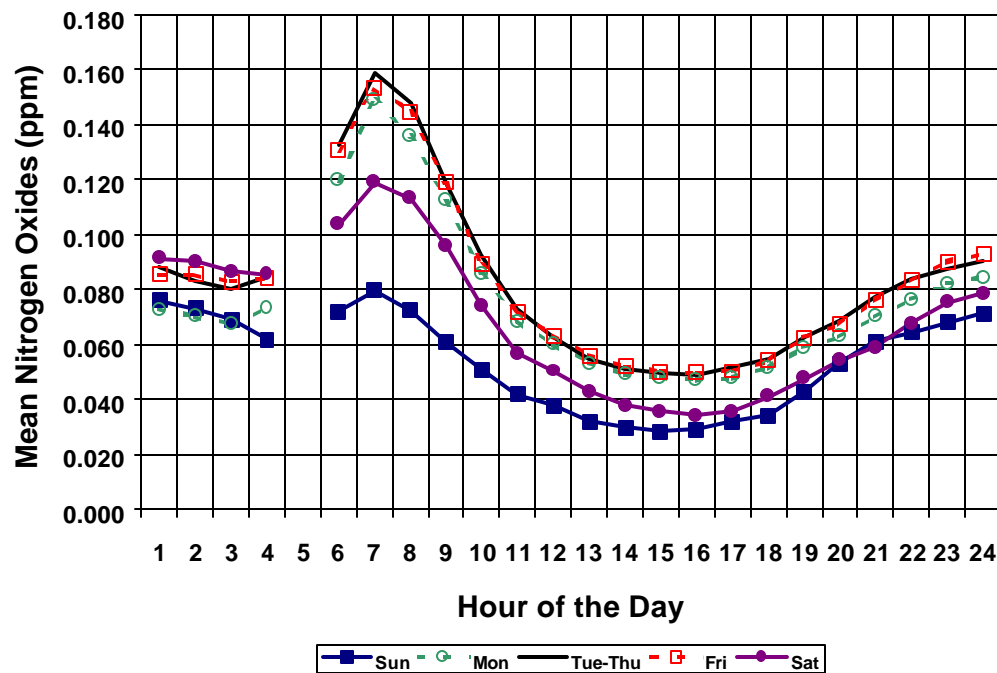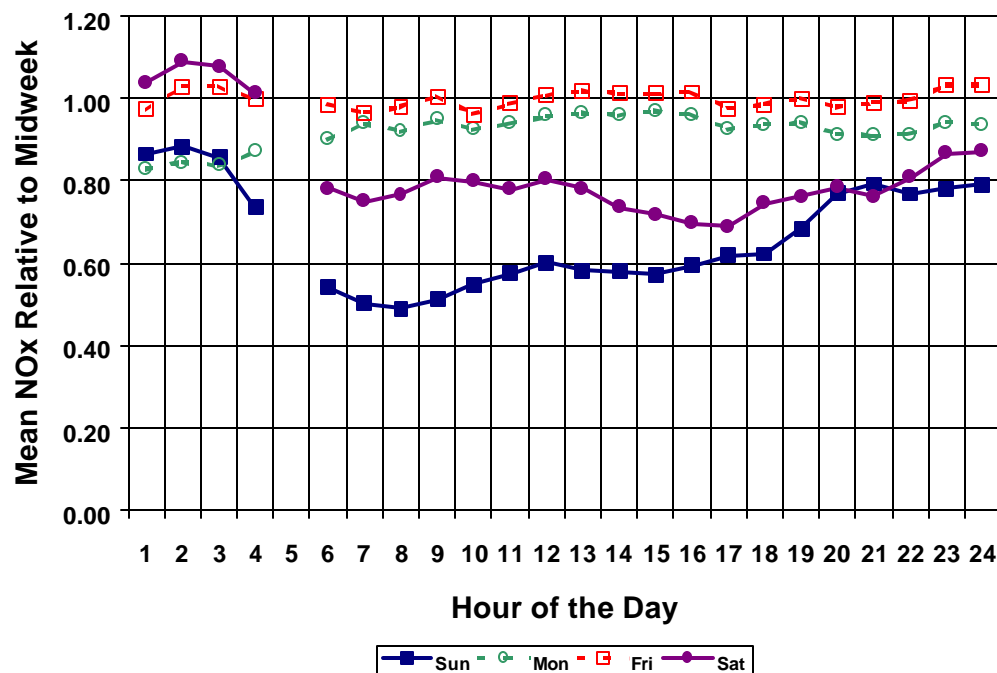

Figure 5.3-51 Ozone profiles for N. Long Beach, expressed as a proportion of the midweek values.

Figure 5.3-52 Carbon monoxide profiles by day of week at Pico Rivera, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-53 Carbon monoxide profiles for Pico Rivera, expressed as a proportion of the midweek values.

Figure 5.3-54 Nitrogen oxides profiles by day of week at Pico Rivera, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-55 Nitrogen oxides profiles for Pico Rivera, expressed as a proportion of the midweek values.

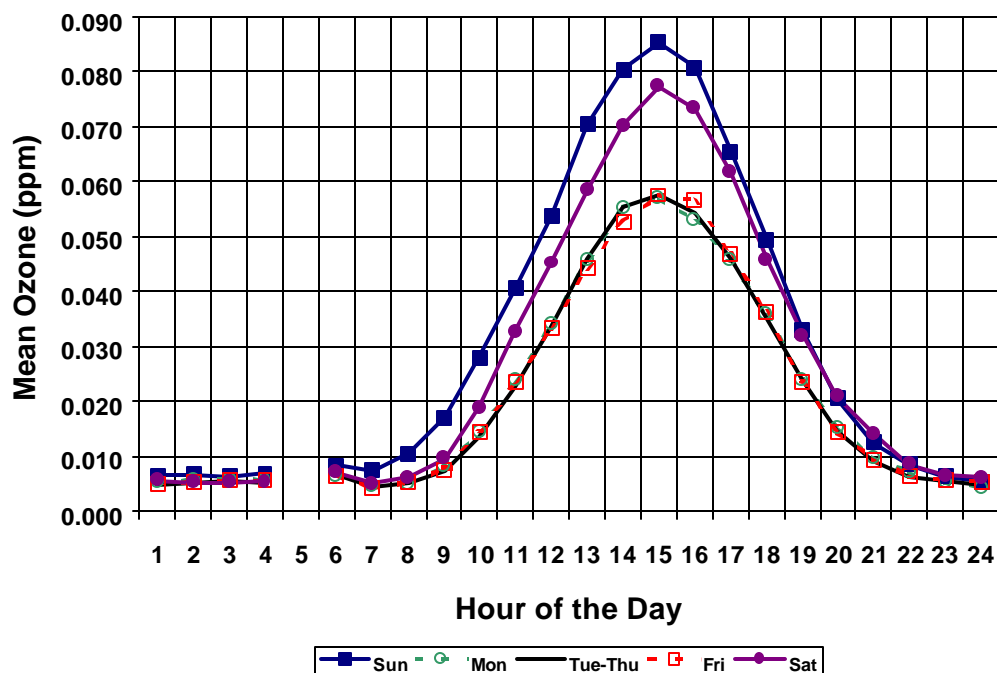**Figure 5.3-56 Ozone profiles by day of week at Pico Rivera, based on data for the May – October ozone seasons of 1996-1998.**

Figure 5.3-57 Ozone profiles for Pico Rivera, expressed as a proportion of the midweek values.
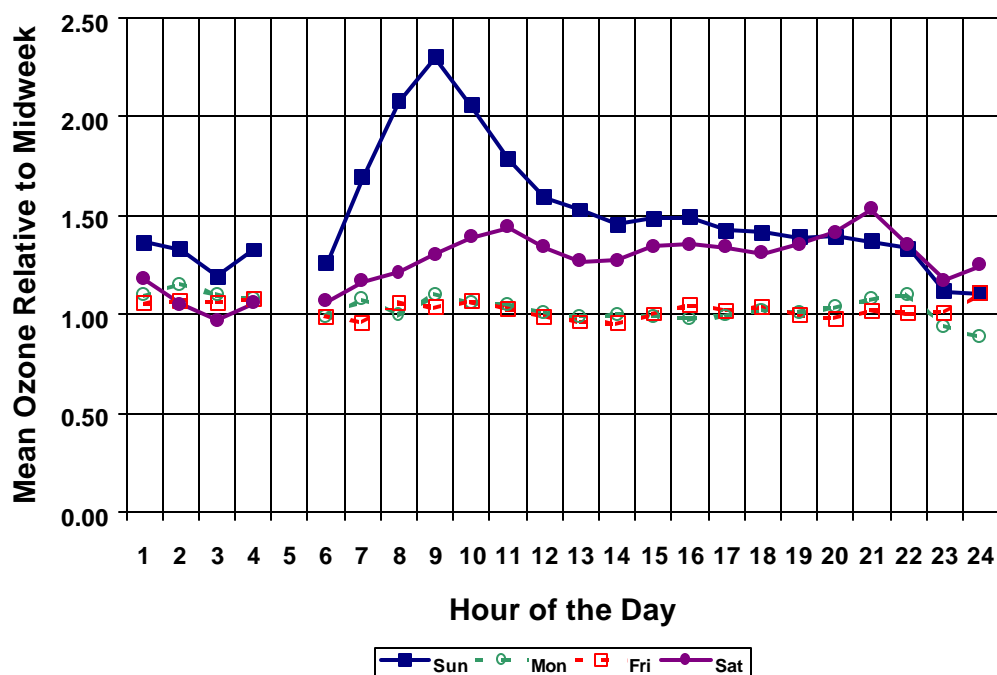
Figure 5.3-58 Carbon monoxide profiles by day of week at Pomona, based on data for the May – October ozone seasons of 1996-1998.
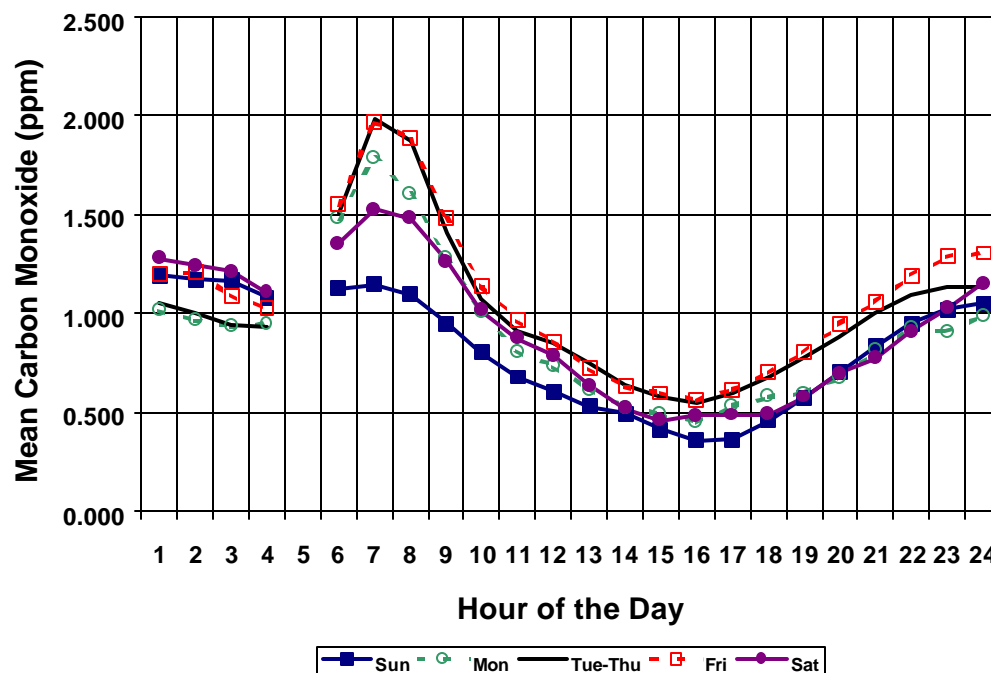

Figure 5.3-59 Carbon monoxide profiles for Pomona, expressed as a proportion of the midweek values.
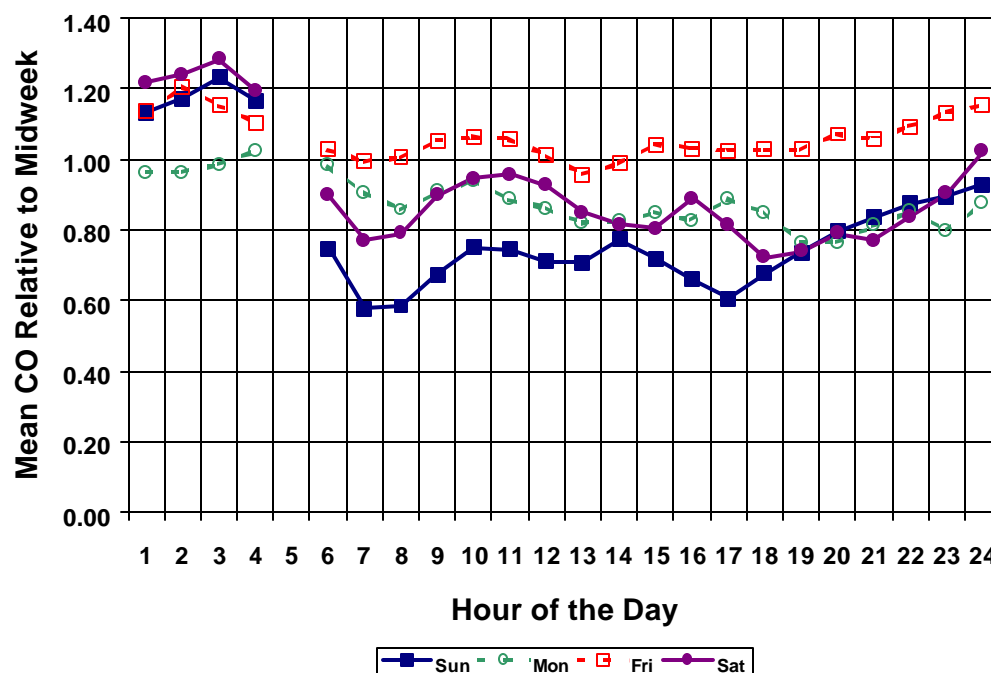
Figure 5.3-60 Nitrogen oxides profiles by day of week at Pomona, based on data for the May – October ozone seasons of 1996-1998.
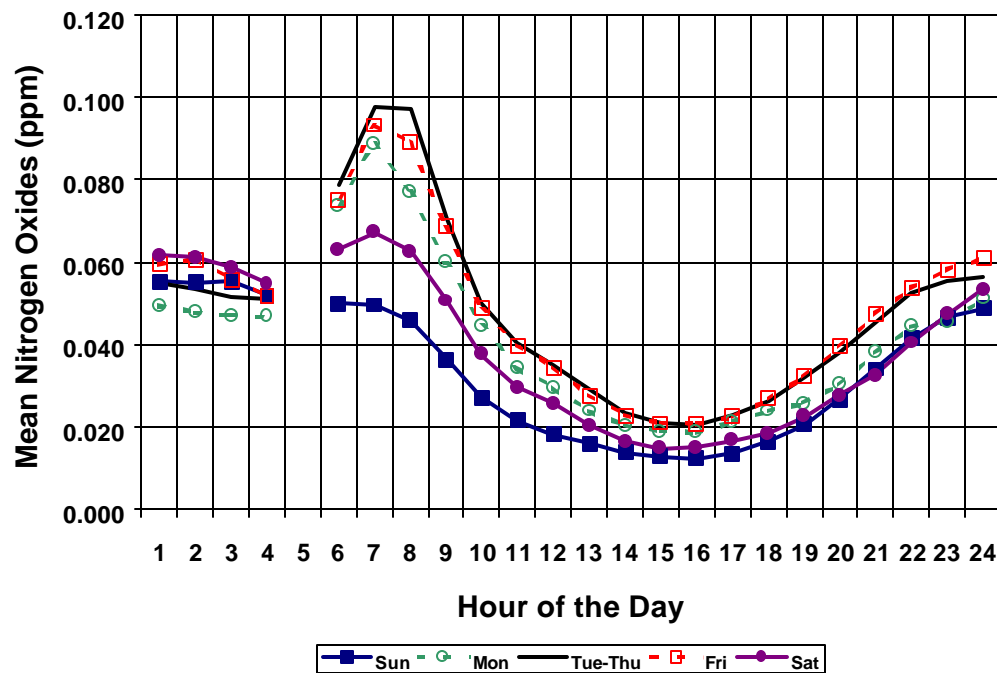

Figure 5.3-61 Nitrogen oxides profiles for Pomona, expressed as a proportion of the midweek values.
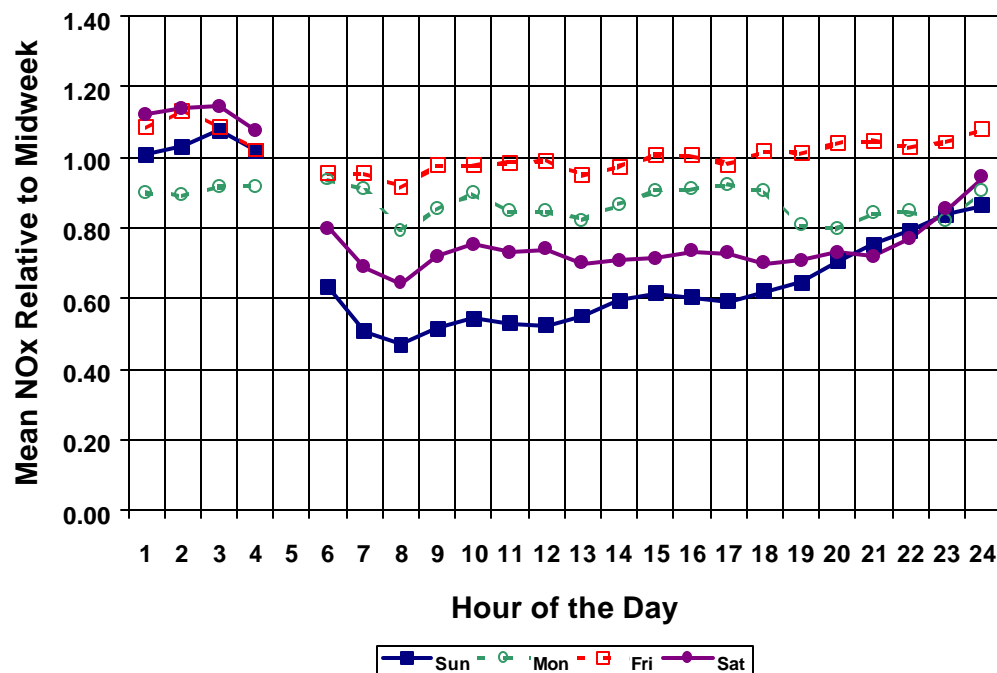
Figure 5.3-62 Ozone profiles by day of week at Pomona, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-63 Ozone profiles for Pomona, expressed as a proportion of the midweek values.

Figure 5.3-64 Carbon monoxide profiles by day of week at Reseda, based on data for the May – October ozone seasons of 1996-1998.
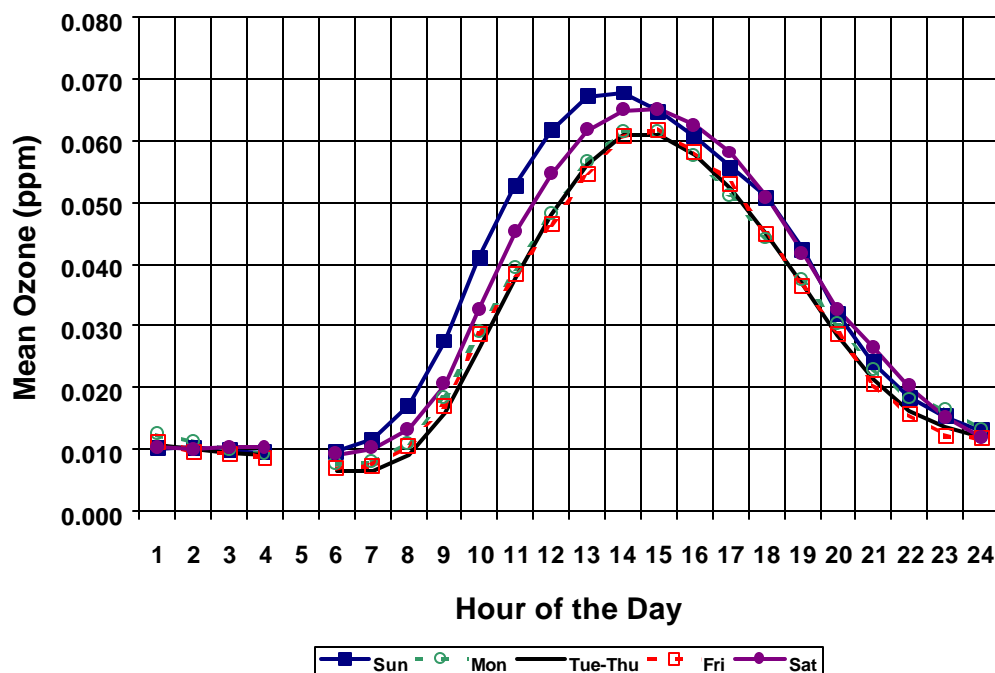

Figure 5.3-65 Carbon monoxide profiles for Reseda, expressed as a proportion of the midweek values.

Figure 5.3-66 Nitrogen oxides profiles by day of week at Reseda, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-67 Nitrogen oxides profiles for Reseda, expressed as a proportion of the midweek values.

**Figure 5.3-68 Ozone profiles by day of week at Reseda,
based on data for the May – October ozone seasons of 1996-1998.**

**Figure 5.3-69 Ozone profiles for Reseda,
expressed as a proportion of the midweek values.**
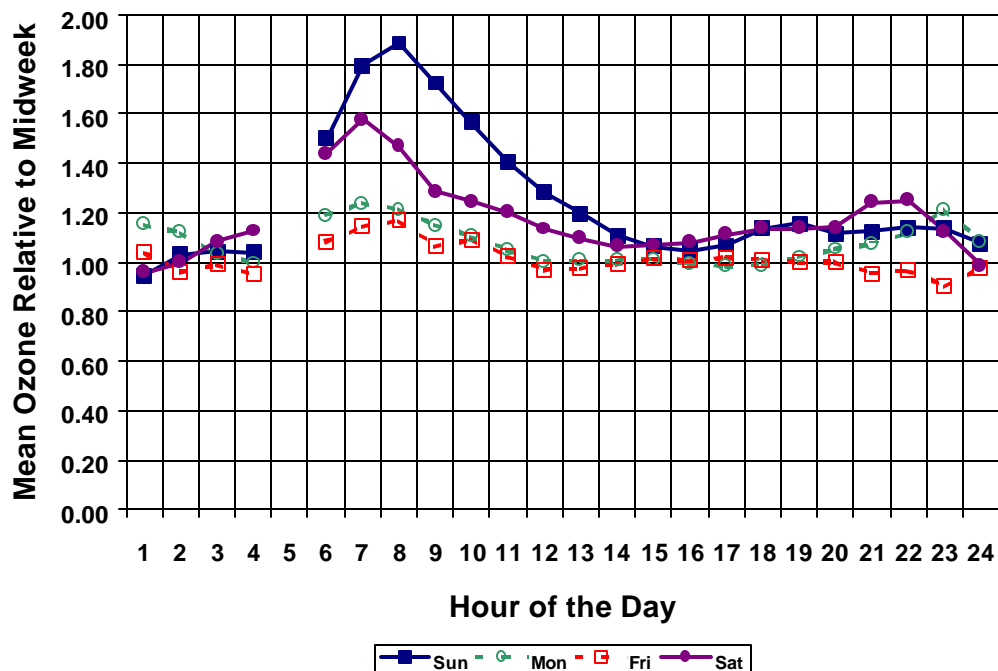
Figure 5.3-70 Profiles for NO₂:NO by day of week at Anaheim, based on data for the May – October ozone seasons of 1996-1998.
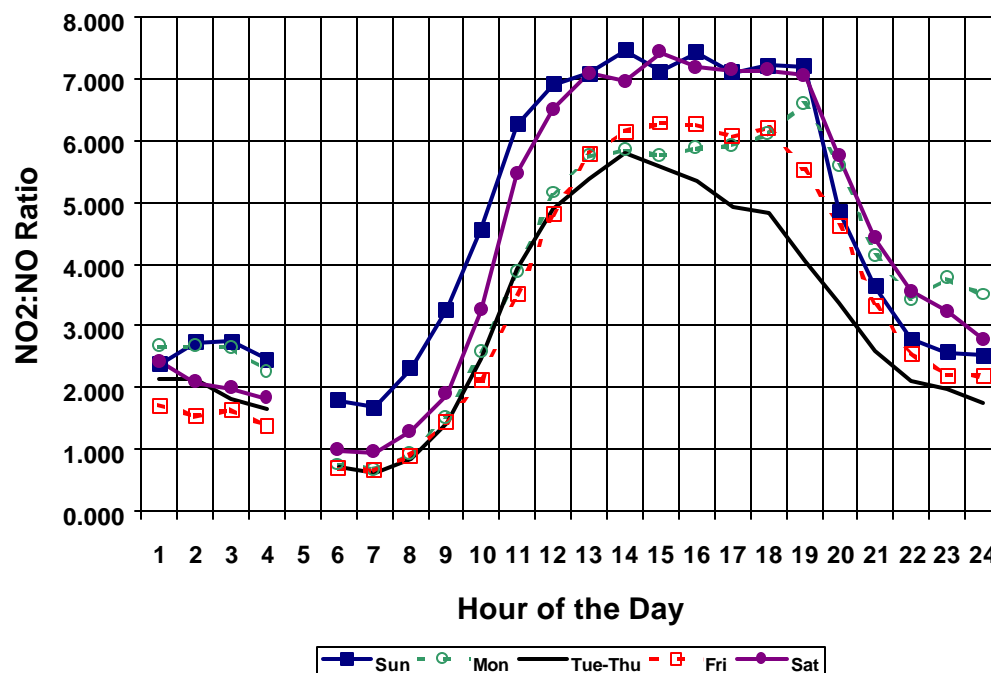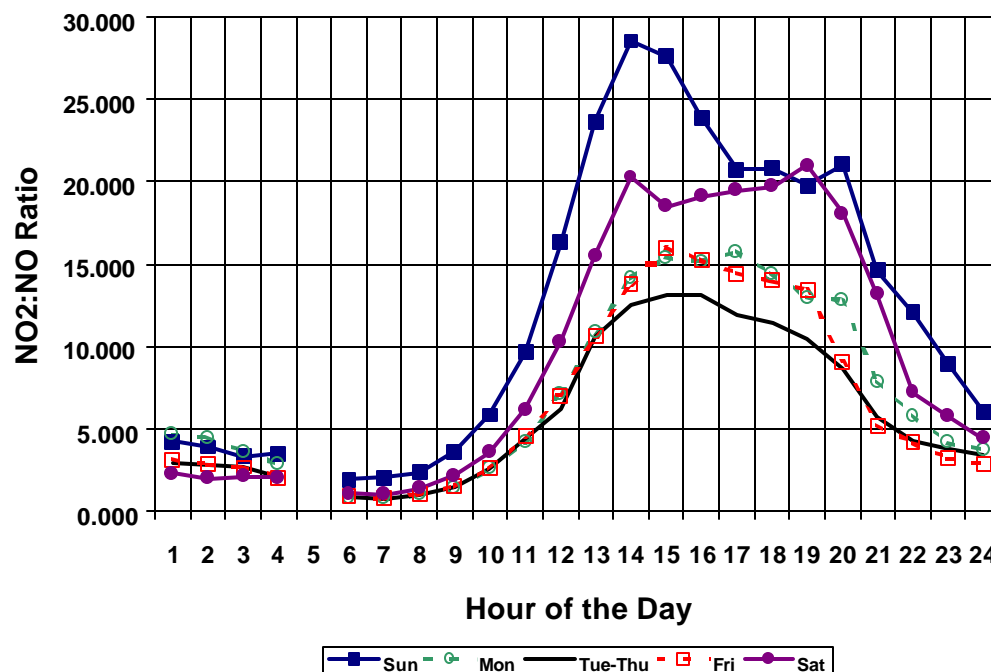

Figure 5.3-71 Profiles for NO₂:NO by day of week at Azusa, based on data for the May – October ozone seasons of 1996-1998.

Figure 5.3-72 Profiles for NO2:NO by day of week at Burbank, based on data for the May – October ozone seasons of 1996-1998.
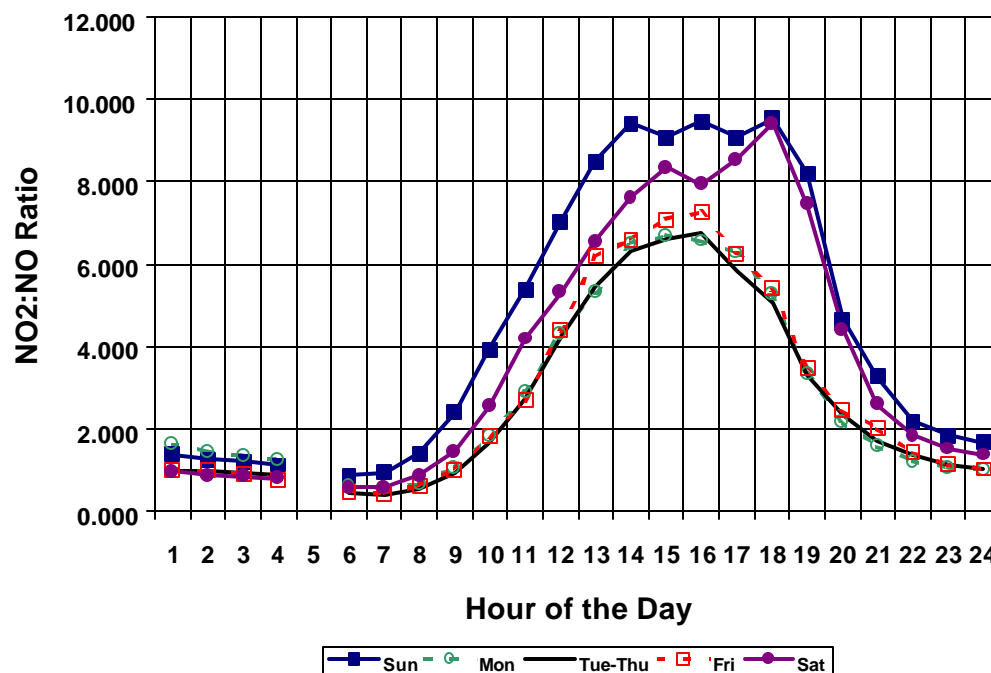

Figure 5.3-73 Profiles for NO2:NO by day of week at Hawthorne, based on data for the May – October ozone seasons of 1996-1998.
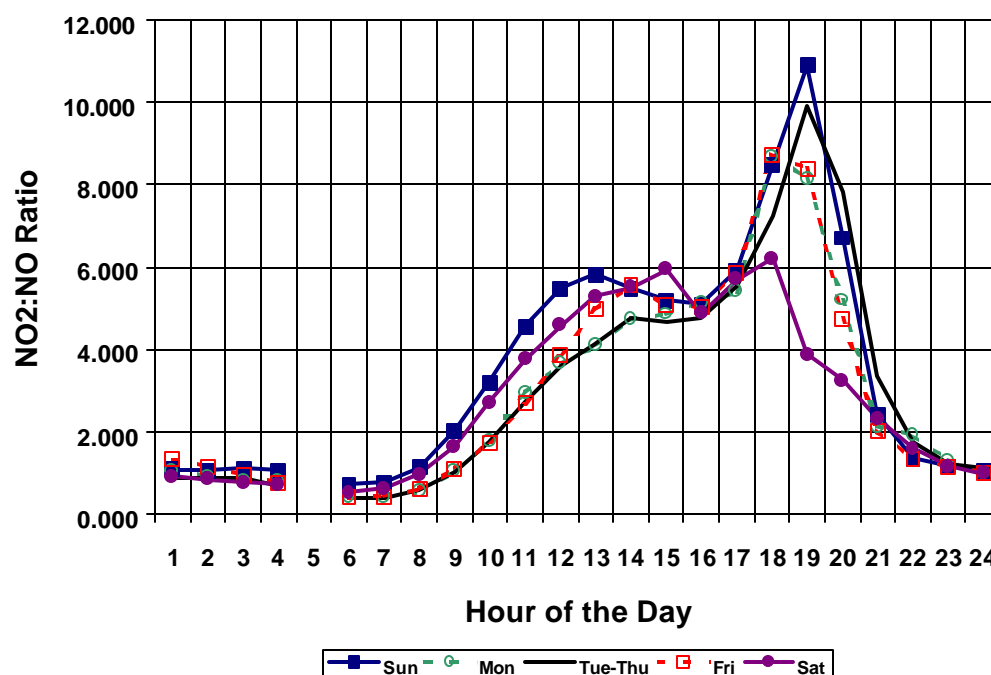
Figure 5.3-74 Profiles for NO₂:NO by day of week at L.A.-N. Main, based on data for the May – October ozone seasons of 1996-1998.
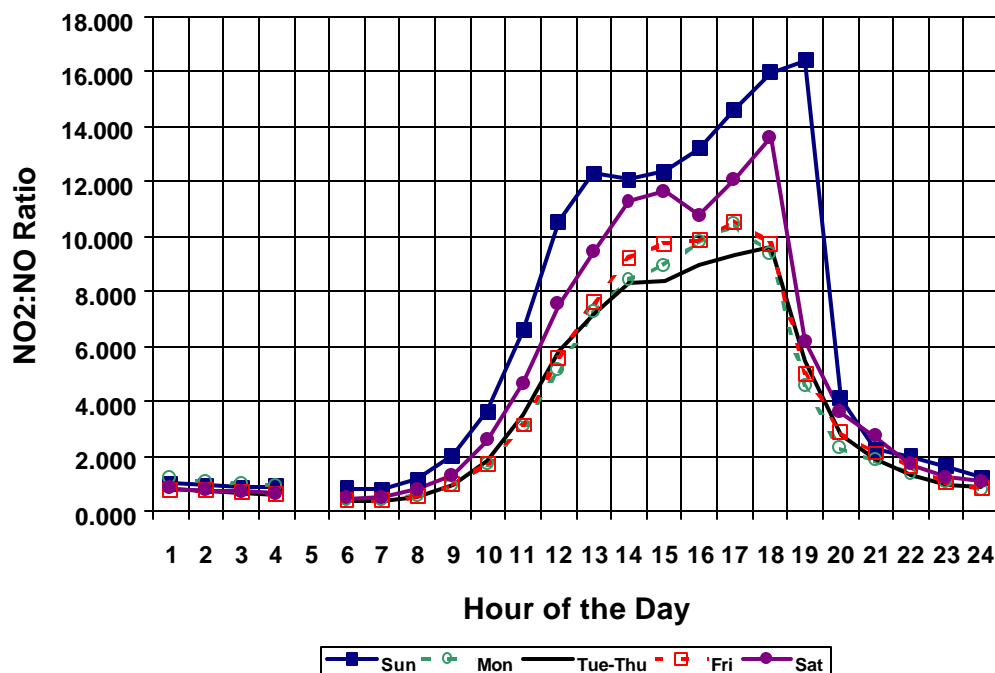

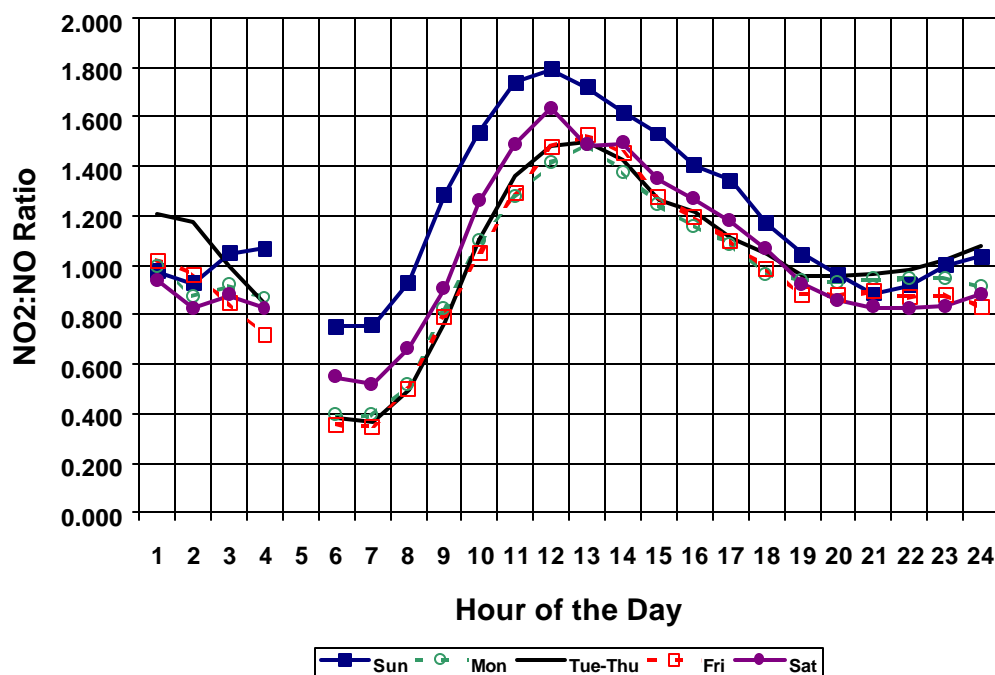**Figure 5.3-75 Profiles for NO₂:NO by day of week at Lynwood, based on data for the May – October ozone seasons of 1996-1998.**

Figure 5.3-76 Profiles for NO₂:NO by day of week at N. Long Beach, based on data for the May – October ozone seasons of 1996-1998.
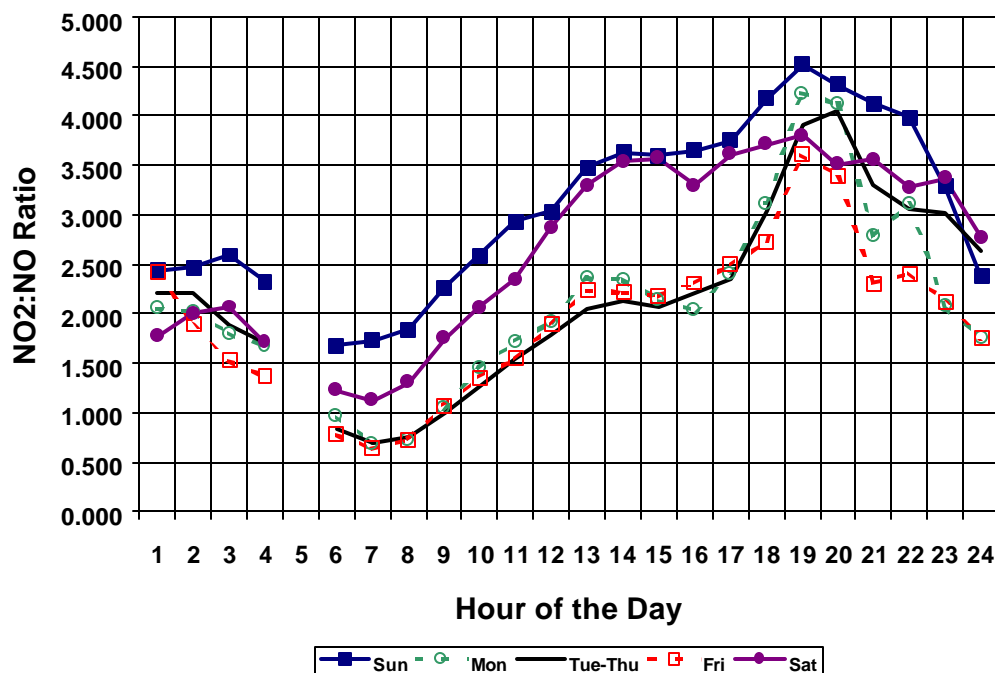

Hour of the Day

Legend: Sun, Mon, Tue-Thu, Fri, Sat

Figure 5.3-77 Profiles for NO₂:NO by day of week at Pico Rivera, based on data for the May – October ozone seasons of 1996-1998.

Hour of the Day

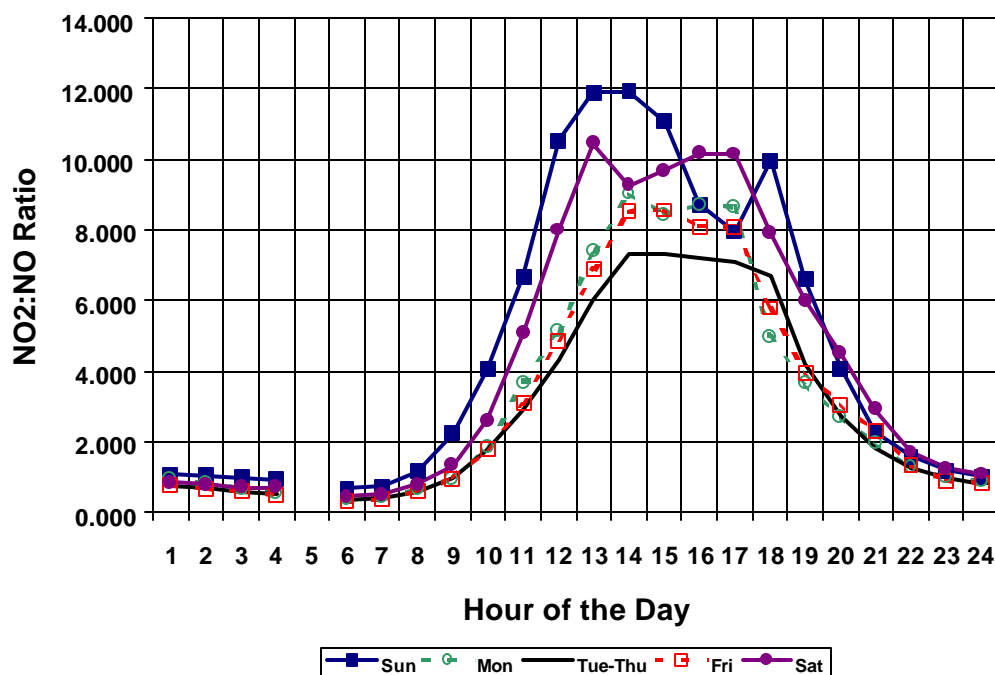Legend: Sun, Mon, Tue-Thu, Fri, Sat

Figure 5.3-78 Profiles for NO₂:NO by day of week at Pomona, based on data for the May – October ozone seasons of 1996-1998.
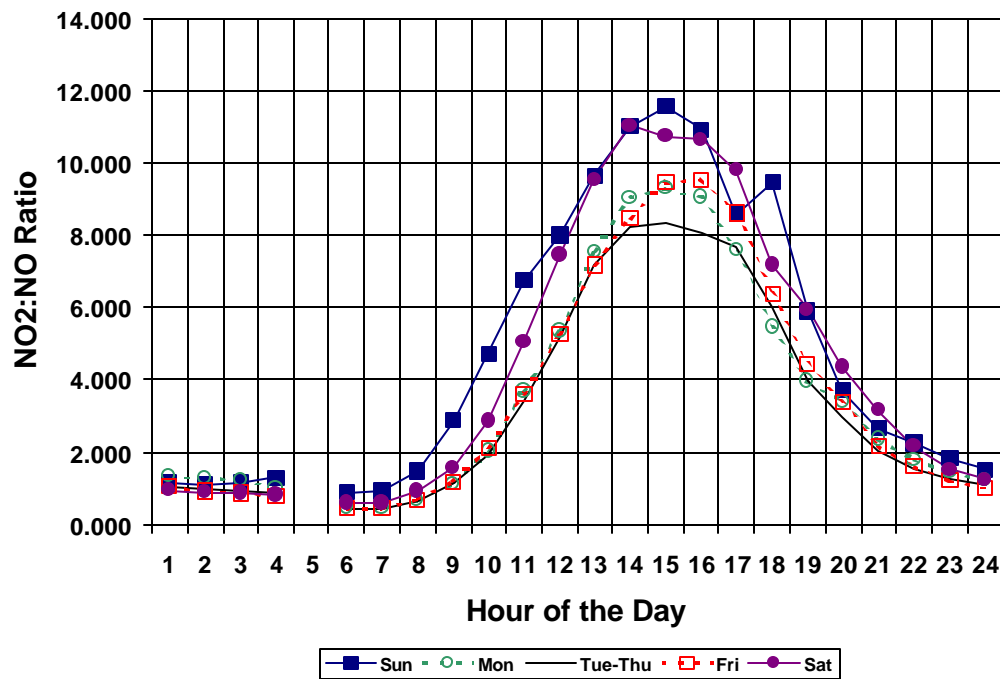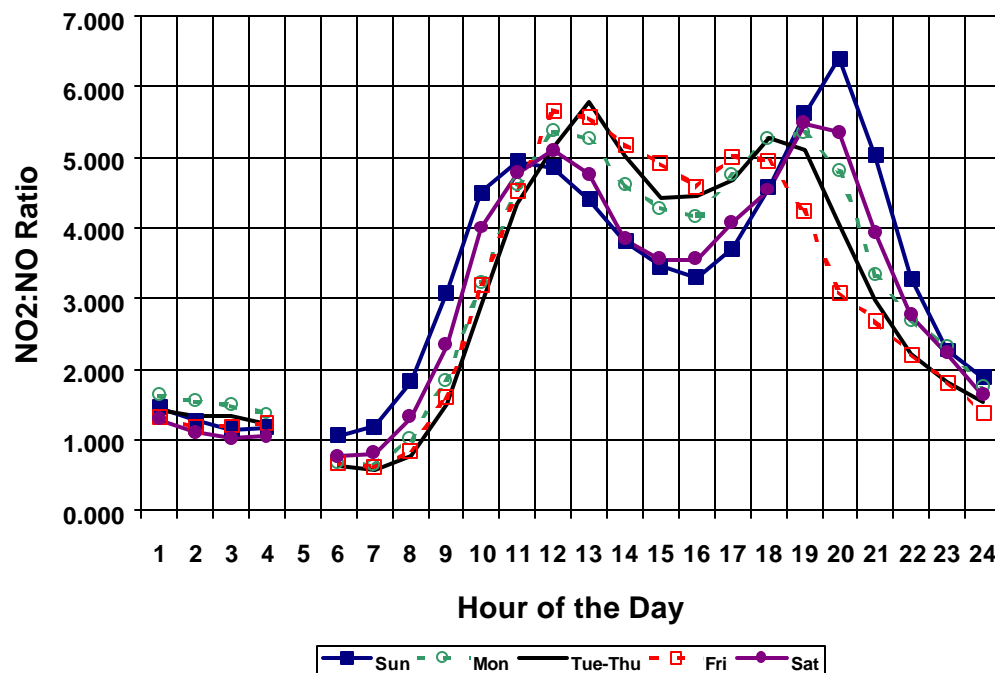

Figure 5.3-79 Profiles for NO₂:NO by day of week at Reseda, based on data for the May – October ozone seasons of 1996-1998.

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